

Subject Index to Volume 255

A

A6 cells
epithelia, differentiation, dexamethasone and, C661
sodium transport, corticosterone's metabolites for, F736
ACE: *see* Angiotensin-converting enzyme
4-Acetamido-4'-isothiocyanostilbene-2,2'-disulfonic acid
intracellular chloride activity and, proximal straight tubule, F49
intracellular pH and, skin (frog), F126
Acetate, endothelium-independent increases in cAMP and, caudal artery, H1378
Acetazolamide
citrate reabsorption and, proximal convoluted tubule, F301
potassium-depletion alkalosis, F763
Acetylcarnitines, interaction, insulin-stimulated glucose metabolism, E946
Acetylcholine
arterial smooth muscle, H207
bioassay of endothelium-derived relaxing factor, H1259
blockade, cerebral vasodilation, H847
calcium-antagonistic effects, atrial cells (guinea pig), H872
calcium transients induced by, aortic endothelial cells, H1549
depressed automaticity and conduction by, AV node, H7
endothelial cells stimulated by, hyperpolarization and increased free calcium in, H965
gradient in muscle cells, biliary tract, G647
³H-labeled, release, neurokinin effects, atrial muscle, G779
ischemia and reperfusion, cerebr.al artery response, H879
measurement, vascular pressure-volume relations, H690
muscarinic regulation, pulmonary volume, H1219
oxygen free radical effects, endothelium-dependent relaxation of diabetic aorta, H825
pressure-induced contraction and, carotid arteries, H783
relaxation enhanced by, flow-induced, H446
supersensitivity to, sinus and AV nodes, after parasympathetic denervation, H534
vascular reactivity and, saphenous vein, H860
Acetyl CoA carboxylase, prolactin effects, mammary gland explants, E567
Acetyl-CoA hydrolase, activity, cholesterol metabolism relations, R724
N-Acetylneurameric acid, insulin action and, diabetes mellitus, E173
ACh: *see* Acetylcholine
Acid
excretion
inner medullary collecting duct, F307, F1155
net, potassium-depletion alkalosis, F763
extrusion, bicarbonate and, glomerular mesangial cells, C844

secretion, catecholamine-stimulated, jejunum, G640
Acid-base balance
chloride absorption and, intestine (flounder), G247
citrate and bicarbonate, complementary role, F182
hepatic renal interrelations, F807
mesangial cells, glomerular, C844, C857
osmolarity and body temperature, during sodium chloride and water intake, R97
pH and lactic acid output, muscle, forearm, F479
sodium chloride dietary intake, regulation of carbon dioxide ventilation and, R105
urinary, α_1 -adrenoceptor mediation, F116
Acidemia, sodium-hydrogen antiporter activity and, renal, F237
Acidification
adaptation, inner medullary collecting duct, F1155
ANF and angiotensin, proximal effects, F434
suppression of, inner medullary collecting duct, F307
Acidosis
acute extracellular, catecholamine release and (trout), R395
citrate reabsorption and, proximal convoluted tubule, F301
extracellular, ATP-deleted hepatocytes, C315
glucose tolerance induced by, adrenergic blockade effects, E812
inorganic phosphate content and, heart, H189
metabolic
alanine and, kidney, R42
renal adaptation, senescence and, F1183
sodium-hydrogen antiporter activity, F237
naloxone and circulatory changes, awake state, H1106
parathyroid hormone effects, renal proximal tubular segments, F847
respiratory
bicarbonate transport and, collecting tubules, F656
sodium-hydrogen antiporter activity, F237
Acid phosphatase, bone changes, after weightlessness in short spaceflight, R243
Acridine orange, fluorescence, jejunal brush borders, G206
ACTH: *see* Adrenocorticotropin
Actin, nonrandom turnover, cardiac fibroblasts, C202
Acyl-coenzyme A oxidase, myocardial fatty, properties and subcellular localization, H441
Addison's disease, potassium regulation, aldosterone role in, F811
Adenine nucleotides, synthesis, skeletal muscle fiber types, C271
Adenosine
calcium-antagonistic effects, atrial cells (guinea pig), H872
calcium influx and, coronary artery, H1492
coronary artery constriction, flow-mediated attenuation, H1317
coronary vasodilation induced by, dual control, H250
food-induced jejunal hyperemia and, G168
interstitial fluid, cerebral blood flow and, hemorrhagic hypotension, H1211
intracellular calcium and, cortical collecting tubule cells, C581
intrarenal, renal blood flow and, F1230
ischemia and reperfusion, cerebral artery response, H879
portal blood flow and, G417
release, heart, development effects (guinea pig), H1460
role in noradrenergic neurotransmission, H386
stimulation of proliferation, endothelial cells, H554
Adenosine analogues, tubuloglomerular feedback responses and, F33
Adenosine monophosphate, cyclic abnormal regulation, pancreatic islets, obesity, E833
activation, prostaglandin E₂ response, colonic cell line, G27
ADH and, membrane, urinary bladder (toad), F375
adrenergic stimulation and, ANP release, E260
ANF vasodilatory action and, glomerular afferent arterioles, F415
AVP-dependent levels, PGE₂ and α -adrenergic agonist effects, renal tubules, F43
AVP-sensitive, calmodulin dependence, F834
calcitonin effects on oxytocin, bladder (toad), E613
calcium-activated potassium channel and, aortic smooth muscle cells, H754
dexamethasone effects, A6 epithelia, C661
1,25-dihydroxyvitamin D synthesis, hypoparathyroidism, E730
diuresis, α_2 -adrenoceptor agonist-induced, F317
DNA synthesis and pH depression, osteoblasts, E9
endothelium-independent increases, acetate and, caudal artery, H1378
epithelial cells, tracheal, C760
fluorescent angiotensin II probe, C452
functional G_i protein, changes in expression, heart cells, C51
hepatic, treadmill running and, R38
hormone effects on lipid composition, testes, E442
intracellular calcium transport and, bladder cells (toad), F1015
intracellular pH and, skin (frog), F126
myocardial respiratory control, H185
neuropeptide Y mobilizes calcium, erythroleukemia cells, E880
nicotinamide and phosphate transport, renal brush-border membrane, F15
phosphaturic effect of, β -receptors in resistance to, R557

SUBJECT INDEX TO VOLUME 255

Adenosine monophosphate (*continued*)
production
 glucagon and catecholamine effects,
 hepatocytes (sheep), R539
 synthetic tumoral PTH-related peptide effects, F957

prostaglandin-stimulated contraction and, smooth muscle cells, colon, G807

PTH effects, osteoblast-like cell line, E660

regulation of chloride transport, fibroblasts, C552

renal vasoconstriction, H885

vasopressin stimulation of, cortical collecting tubules, F1107

Adenosine monophosphate analogue, infusion effects, phosphate deprivation, F96

Adenosine triphosphatase
 chloride pump and, controversy, R677
 hydrogen ion, renal cortical endosomes, F885

Adenosine triphosphate
 cellular
 glutathione efflux and, hepatocytes, G403
 substrate specificity, nephron, F977
 concentration, calcium transport and, small intestine, G482

depletion, normoxic heart, C192

hepatocytes depleted in, acidosis effects on cell death, C315

intracellular pH and, myocardial, H189

phosphoinositide metabolism and, aorta, H1476

potassium channels sensitive to, hypertrophied ventricular myocytes, H1254

rate of utilization, carotid artery (pig), C393

receptors: *see* Receptors

Adenylate cyclase

 AVP-sensitive production, calmodulin dependence, F834

 carbachol and, functional G₁ protein, heart cells, C51

 dexamethasone effects, A6 epithelia, C661

 glucocorticoid modulation of, brown fat, E153

 internal anal sphincter relaxation, G571

 neuropeptide Y mobilizes calcium, erythroleukemia cells, E880

 postnatal maturation, papillary muscle, H335

 protease effects, potassium-depleted kidney, F1033

 regulation, obesity, pancreatic islets, E833

 vasopressin-sensitive, lithium inhibition of, renal epithelial cells, F995

ADH: *see* Antidiuretic hormone

Adipocytes
 lactate production, from glucose, regional differences, E716

 microdialysis, lipolysis studies, E737

 3-O-methylglucose transport, growth hormone stimulation of, E723

 size and number, thyroid status effects, E280

Adipose tissue
 brown: *see* Brown fat

 glucose intercellular levels, microdialysis, E218

microdialysis, lipolysis studies, E737

white
 development, thyroid status and, E280

 energy balance in adrenalectomized obese mice, R141

 lipoprotein lipase, high-fat diet and exercise effects, R226

 melatonin and, adult (hamster), R812

ADP-ATP carrier, antibodies against, enhancement of calcium current, myocytes, H960

Adrenal cortex
 circadian variation in response, CRF-41 and AVP, E265

 response to bacterial endotoxin, during growth, E52a

Adrenalectomy
 diet and, denervation atrophy, muscle, E850

 energy balance in, starch and glucose effects, obesity, R141

 food restriction and, somatic growth and diabetes, R787

 glucocorticoid-induced cation transport, spironolactone effects, colon, F1235

 glucose and, brown fat metabolism, E597

 mirex-induced adaptive liver growth, hepatocytes and, G132

 modulation of cyclase activity, glucocorticoids, E153

 sympathetic nerve activity, changes in coronary occlusion, H704

Adrenal gland
 corticosterone, obesity effects, E229

 function, immune activation and, R839

 multiple renin forms, E531

 perfusion, capsaicin, catecholamine secretion and, E23

 steroidogenesis, vasopressin effects, R806

 structure changes, aging, E903

Adrenal glomerulosa cells, calcium response of, external potassium, E488

Adrenal medulla, norepinephrine turnover, genetic hypertension, H736

Adrenal nerve
 excitation, capsaicin, E23

 unequal bulbospinal influences on, R946

Adrenal sympathetic nerve activity, changes in, coronary occlusion, H704

Adrenergic agents, circulatory response to, chloralose effects (lamb), H419

α-Adrenergic agonists, prostaglandin E₂ and, AVP-dependent cAMP levels, renal tubules, F43

Adrenergic-histaminergic interactions, neural, paw, H426

Adrenergic mechanisms, insulin action opposed by, E33

Adrenergic nervous system, myocardial, sympathetic activity in cardiac hypertrophy, H452

Adrenergic stimulation
 inhibition of protein synthesis during, heart, E537

 stimulation of ANP release, E260

β-Adrenergic stimulation, inotropic sensitivity, early sepsis, H699

Adrenocortical cells
 changes during aging, E903

 responsiveness to ACTH, obesity and, E229

Adrenocorticotropin
 adrenocortical cell responsiveness to, obesity and, E229

blood, evaluation of sample, R851

catecholaminergic system control, E463

circadian variation in response, CRF-41 and AVP, E265

corticosteroid inhibition of, R344

corticosterone release, CRF infusion effects, E213

corticosterone-releasing effects, R839

plasma concentration, vasopressin infusion effects, awake state, R665

secretion, maternal cortisol secretion effects, fetus (sheep), R412

steroid inhibition of, E241

vasopressin effects, adrenal steroidogenesis, R806

vasopressin release and, CRF and angiotensin II effects, awake state, E46

Adriamycin, nephrosis, renal ablation in, F1243

Aerobic capacity, hemin effects, skeletal myotubes, C519

Afferent fibers
 renal, intrarenal bradykinin effects, R994

vagal, serotonergic mechanisms during hemorrhage, H496

Afferents, vagal: *see* Vagal afferents

Aggrophores, ADH-stimulated delivery, vesicular transport role in (toad, frog), C641

Aging
 adrenal gland changes, E903

 body fluid volume changes, spontaneous hypertension, F953

 calcium binding and, cortical bone extracts, H101

 decreased colon secretion, nongoblet crypt cells, G72

 feeding and, glomerular filtration rate and proteinuria, awake state, F250

 tubular adaptation, phosphate reabsorption, F278

β-Agonist, hypotensive effects, awake state, H592

Airway
 tone, response to neuropeptides in ventral medulla, R780

 upper, pulmonary and systemic blood flow contributions, lung, H1130

Alanine
 production, physiological hypercortisolism effects, E366

 renal metabolism and, R42

Alanine aminopeptidase, transport, apical membranes, F1249

Albumin
 crystal absorption, growth slowing and, F1197

 flux, volume flow and, skin and muscles, H458

 permeability, bacterial exotoxin effects, C368

 reabsorption kinetics, pleural space, H375

 water channels and, endothelium, H638

Alcohol, portal blood flow increase and, G417

Aldosterone
 adaptation to sodium delivery and, distal tubule and collecting duct adaptation to, F1256, F1269

 characteristics, papillary collecting duct cells, F1160

 cytosolic calcium and, glomerulosa cells, E338

SUBJECT INDEX TO VOLUME 255

hypoxia, awake state (sheep), R274
 intravenous endothelin effects, awake state, R1064
 natriuresis, atrial stretch and, R259
 plasma renin activity and, awake state, E793
 potassium regulation and, F811
 renin, angiotensinogen, and ANP mRNA levels, E129
 secretion, ANH hormone effects, sodium depletion, R867
 sodium repletion and, colonic ion transport, G329
 vagal activity, hypotensive lower-body negative pressure effects, R149
 vasopressin and
 adrenal steroidogenesis, R806
 central interactions on cardiovascular system, R166
 Algorithms, pulse-detection, computer simulation of hormone secretion, E775
 Alkaloids, veratrum, neural control of rectal gland (shark), R212
 Alkalosis
 inorganic phosphate content and, heart, H189
 metabolic
 citrate and bicarbonate role in, F182
 collecting duct chloride transport, F220
 potassium-depletion, F763
 Allergy, food, motility and anaphylaxis, intestinal, G505
 Allometry, renal (lizard), R760
 Allopurinol, antioxidant properties of extracellular fluid and, H202
 Altitude, high, liver and heart mitochondria, C123
 Alveolar epithelium, permeability, cathepsin G effects, C603
 Amiloride
 cation channel sensitive to, apical membrane, inner medullary collecting duct, F278
 cell death in hepatocytes, extracellular acidosis effects, C315
 characteristics, papillary collecting duct cells, F1160
 decreased secretion, aging and, colon, G72
 DNA synthesis and pH depression, osteoblasts, E9
 intestinal response, G18
 intracellular pH and, skin (frog), F930, F922
 oxytocin effects, skin epithelium (frog), C357
 paracellular pathway, cortical collecting duct, F720
 postischemic recovery and, heart ventricles, H608
 sensitivity to, sodium-hydrogen exchange and, LLC-PK, mutant, C495
 sodium channel protein, antibodies against, renal papilla, C835
 sodium-chloride absorption and, proximal tubule, F461
 sodium-chloride taste response after, R1002
 sodium-hydrogen exchange and, renal cells (opossum), C76
 taste transduction, tongue, R117
 transport, jejunal brush-border membrane vesicles, G206
 transport site, urea, skin (toad), F429
 vascular reactivity and, saphenous vein, H360
 Amines, biogenic, pulmonary vascular reactivity to, acute hypoxia, H329
 Amino acids
 branched-chain, metabolism, kidney mitochondria, E475
 dietary regulation of transport, intestinal, G143
 extraction effects, protein kinetics, R303
 infusion, renal response, diabetic adults, F755
 kinetics, time course of cortisol action, E366
 metabolism, insulin responsiveness of, bedrest, E548
 muscle, protein synthesis and, E166
 plasma, renal hemodynamics and, F444
 transport
 growth-dependent regulation of system A in, C261
 inactivation by PCMBS, hepatocytes and hepatoma cells, C340
 juxtaglomerular nephrons, F397
 liver plasma membrane vesicles, G253
 low-affinity, intestinal, C737
 tumor necrosis factor and, E206
 γ -Aminobutyric acid
 3 H-labeled, regulation of release, urinary bladder (guinea pig), R888
 inhibition of sympathoexcitatory neurons, midline medullary stimulation, R605
 Aminoglycosides
 microsomal protein synthesis inhibition, F265
 p-Aminohippurate, coupled transport, basolateral membrane vesicles, renal, F597
 Aminophylline, jejunal hyperemia, food-induced, G168
 Amino terminus, biologically active, PTH peripheral metabolism, E886
 Ammonia
 loss, proximal tubule, F861
 permeation, apical membrane, MDCK cells, F135
 Ammoniogenesis
 alanine effects, renal metabolism, R42
 intranephron, purine nucleotide cycle effects, F1122
 parathyroid hormone effects, renal proximal tubular segments, F847
 Ammonium
 absorption activity, thick ascending limb, F57, F78
 excretion, renal, metabolic acidosis in senescence, F1183
 Ammonium chloride, potassium-depletion alkalosis, F763
 Amniotic fluid, regulation of cholesterol metabolism, aorta, fetus, H160
 Amphotericin B
 benzodiazepine effects and, oxygen consumption, thick ascending limb, C385
 histidine effects on vasopressin action, bladder (toad), F685
 Amylase
 secretion
 caerulein effects, pancreatic acini, G33
 trypsin inhibitor treatment effects, G236
 α -Amylase, glycosylated, clearance, terminal fucose residues in, G374
 Anaerobic metabolism, interleukin 1, tumor necrosis factor and, E760
 Anal sphincter
 external, properties of, G772
 internal
 purinoceptors in (opossum), G389
 relaxation, G571
 Anaphylaxis
 intestinal, proximal colon, G201
 intestinal motility and, G505
 Androgen, body size and (monkey), E857
 Anesthesia
 response to low-dose ANP infusion, renal, R449
 urethan, changes during thermoregulation and fever, R73
 VIP effects and, vascular conductance, R968
 Anesthetics, local, recovery kinetics (frog), H1558
 ANF: see Atrial natriuretic factor
 Angiogenesis, stimulation of proliferation, endothelial cells, H554
 Angiotensin
 ANF and, proximal effects, F434
 antagonism, angiotensin-converting enzyme inhibition and, F944
 arterial pressure and, awake state, R693
 captopril and, renal function, diabetic adults, F755
 ischemia and reperfusion, cerebral artery response, H879
 peritubular infusion, tubuloglomerular feedback during, F383
 potassium depletion and, renovascular hypertension, H1181
 potassium regulation, aldosterone role in, F811
 receptors: see Receptors
 sodium appetite related to, thirst and (cow), R205
 thirst mechanisms, R217
 Angiotensin-converting enzyme, inhibition, angiotensin antagonism and, F944
 Angiotensin II
 angiotensinogen synthesis and, hepatocytes, E70
 autoregulation of cardiac output, hypertension, awake state, H44
 bradykinin action, proximal tubule, F486
 cAMP and, functional G_i protein, heart cells, C51
 CRF effects and, ACTH and vasopressin release, awake state, E46
 cytosolic calcium elevation and, glomerular cells, E338
 drinking and pressor responses to, paraventricular nucleus lesion effects, R882
 enhanced activity, anterior pituitary cell aggregates, hypertension, R407
 fluorescent probe, development, C452
 hyperresponsiveness of arterial rings and, H272
 kinins and, regulation of papillary blood flow, F690
 levels, during drinking, R500
 local control of blood flow, mesenteric, G267
 modulation of intrarenal effects, ANP, F545
 nephrosis, renal ablation in, F1243
 pressor responsiveness, estrous cycle, R1041
 receptors: see Receptors
 relaxation induced by, aorta (fowl), R591
 renal function mechanism, kidney function, F749

SUBJECT INDEX TO VOLUME 255

Angiotensin II (continued)
 renal nerve interactions, during sodium deprivation, F823
 TRH and BAY K 8644 stimulation, prolactin release, C633
 vascular responses to, antiserum to angiotensin-binding protein, H1542
 vasopressin effects, adrenal steroidogenesis, R806
 Angiotensinogen
 granules, renal, Triton WR-1339 in, E353
 mRNA levels
 regulation of accumulation, hepatocytes, E70
 sodium balance effects, E129
 Anions
 exchange
 placental microvillous membrane, fluorescence measurement, C789
 transepithelial, collecting duct, F220
 hypotonic volume regulation and, proximal straight tubules, F853
 organic
 biliary secretion, G745
 transport, renal basolateral membrane vesicles, F597
 transport, sex differences, liver, G822
 Anisomycin, protein synthesis inhibition by, biological rhythms (hamster), R1055
 Anisotropy, fluorescence, epinephrine and platelet activation, H1276
 Anococcygeus muscle, heat production, during isometric contraction, C536
 Anorexia, α - and β -adrenergic, ontogeny, R908
 Anoxia
 brain
 evoked potential activity and (turtle), R478
 orthodromic field potentials (turtle), R485
 glucose 1,6-bisphosphate during, skeletal muscle, C140
 glycolysis in, organ-specific control of (turtle), R774
 ion composition, brain and CSF, diving (turtle), R338
 ANP: see Atrial natriuretic peptide; Atrial natriuretic polypeptide
 Antidiuresis
 subepicardial changes in vasopressin and, awake state, R940
 vasotocin-induced, glomerular filtration changes (kelp gull), R936
 Antidiuretic hormone: see also Vasopressin action, indomethacin effects, bladder (toad), F74
 aggregate delivery stimulated by, vesicular transport role in (toad, frog), C641
 apical membrane responses to, cytochalasin B effects, bladder (toad), C526
 apical plasma membrane, urinary bladder (toad), F375
 binding and internalization, collecting duct cells, C622
 cAMP-binding protein and, medullary tubules, F292
 hypotonic cell volume regulation, medullary thick ascending limb, F962
 modulation, diluting power of thick limbs of Henle, F1145
 permeability and, skin epithelium (frog), C357

phosphate metabolites and, renal, NMR studies of, F581
 plasma, glomerular filtration changes (kelp gull), R936
 vasoconstrictor effect of, blockade after hemorrhage, awake state, H1325
 Antimycin A, glutathione efflux and, hepatocytes, G403
 Antropyloroduodenal activity, gastric emptying of liquid meals, G93
 Aorta
 cholesterol metabolism in, fetus, H160
 coarctation, renal cytochrome P-450-related arachidonate metabolism in, F151
 constriction, cardiac hypertrophy in, sympathetic activity during, H452
 diabetic, endothelium-dependent relaxation, oxygen free radical effects, H825
 phosphoinositide metabolism, H1476
 potassium channel, calcium-activated, H410
 regurgitation, left ventricular wall volume and, H1399
 relaxation, angiotensin II-induced (fowl), R591
 Aortic nerves, afferent vagal C-fibers, ANF effects, R6
 Arachidonate, renal cytochrome P-450 related metabolism, aortic coarctation, F151
 Arachidonic acid
 cascade, kinins and vascular injury, H397
 histamine stimulation of, endothelial cells, C214
 LH response to, gonadal steroid effects on, E314
 metabolism, aorta (fowl), R591
 orally fed, absorption and metabolism, G612
 Arachidonic acid metabolites, ethanol vasodilation and, gastric submucosa, G731
 Arcuate nucleus, hypothalamic lesions, LH pulses and, E583
 Area postrema, stimulation, cardiovascular changes and, R855
 AR4-2J cells, somatostatin receptors on, G113
 Arousal state, neuronal activity, REM and NREM sleep and hibernation (squirrel), R1008
 Arrhythmias
 calcium-dependent action potentials, reperfusion and, H992
 reentrant and focal, low potassium and, heart atrium, H1359
 ventricular, induction, shock strength and timing effects, H891
 Arterialization, oxygen consumption, forearm, measurement, E572
 Arterial rings, hyperresponsiveness, renal prehypertensive plasma effects, H272
 Arterioles
 cerebral, stroke and, H623
 cheek pouch, oxygen responses, lipoxygenase inhibitor effects (hamster), H711
 glomerular afferent, vasodilatory action of ANF, F415
 microvascular perfusion, cardiac hypertrophy, renal hypertension, H1384
 Arteriovenous fistula, flow-induced enhanced relaxation, acetylcholine, H446
 L-Aspartate, transport, intestinal, C737
 Atherosclerosis
 high-density lipoproteins, regulation of plasma lipid transfer, E894
 ischemic, thromboxane antagonism effects, H318
 ATPase: see Adenosine triphosphatase; Calcium-ATPase; Sodium-potassium-ATPase; Sodium-phosphate-ATPase
 ATP: see Adenosine triphosphate
 Atria: see Heart atria
 Atrial natriuretic factor
 angiotensin and, proximal effects, F434
 calcium mobilization induced by vasoressin and, glomerular mesangial cells, F771
 cGMP response to, spontaneous hypertension, vascular smooth muscle cells, C573
 dopamine receptors and, renal effects, F494
 dose response and pharmacokinetics, renal, R929
E. coli enterotoxin, kidney receptors for (opossum), F1040
 gene expression and plasma levels of, sodium intake effects, H245
 glucose-stimulated insulin secretion and, E579
 hypothyroidism, during volume expansion, R61
 intravenous endothelin effects, awake state, R1064
 metabolism, renal, F466
 microinjection of, dorsal medulla, cardiovascular responses, R182
 perinatal expression, cardiac tissue, E388
 receptors: see Receptors
 reflex activation and, sympathetic nervous system, H685
 release
 atrial distension and, isolated heart, R232
 hypophysectomy, R534
 renal activity, cGMP as biological marker of, F1220
 renal responses and, blood volume expansion, F936
 response, vascular volume expansion, urine flow and (sheep), R846
 salt adaptation and (fish), F1281
 secretion
 hypoxemia stimulation of, H295
 ouabain effects, atrial cardiocytes, E383
 sodium chloride permeability and, inner medullary collecting duct, F421
 sympathetic inhibition by, vagal C-fiber blockade effects, R6
 vasodepression induced by, central nervous system, H616
 vasodilatory action, glomerular afferent arterioles, F415
 Atrial natriuretic hormone, renal function, aldosterone secretion and, R867
 Atrial natriuretic peptide
 adrenergic stimulation of release, E260
 calcium and protein kinase C role in, cardiocytes, H405
 intrarenal effects of, angiotensin II modulation of, F545

SUBJECT INDEX TO VOLUME 255

low concentration, pressure-dependent natriuresis and, kidney, F391
low-dose infusion, renal response in anesthesia, R449
metabolic clearance of, kidney and, E934
norepinephrine-stimulated secretion, inhibition by methacholine, H1429
physiological dose of, renal function and, F907
receptors: *see* Receptors
regional hemodynamic effects, R737
release, renal function and, vasopressin effects, E449
renin and vasopressin, postural release, R368
response to saline loading, essential hypertension, F1085
saline loading and, awake state, H144
solute excretion mediated by, renal ablation, F1091
spontaneous hypertension, vascular smooth muscle cells, C169
tubular sites of action, F313
volume expansion and, additive and synergistic interaction, F66

Atrial natriuretic polypeptide, release, hypercalcemia and ouabain effects, E437

Atriopeptin
cGMP and, renin release, F474
intravenous endothelin effects, awake state, R1064
plasma, decline during atrial distension, R259
sympathetic inhibition by, vagal C-fiber blockade effects, R6
Atriopeptin III, blood volume expansion, renal responses, F936

Atrioventricular node
acetylcholine effects, H7
conduction, differential sympathetic regulation, H1050
conduction pathway through, computer algorithm for modeling transmission, H1247
propagation, hysteresis in, H985
supersensitivity to ACh, after parasympathetic denervation, H534
vagal preganglionic somata control of, localization, R703

Atropine
bioassay of endothelium-derived relaxing factor, H1259
chronotropic effects, heart rate, H311
esophageal response to distension (opossum), G587
lower esophageal sphincter relaxation, on-line computer analysis, G794
vagal activity, hypotensive lower-body negative pressure effects, R149

Automaticity, depolarization-induced, ischemic conditions and reperfusion effects, H992

Autonomic control, regulation of nerve activity, exercise training effects, H974

Autonomic nerves, extrinsic, sphincter of Oddi (opossum), G619

Autonomic nervous system
activation, CRF, R744
cardiac output, during hypotension, awake state, H44
pulmonary vasodilation, combined neuromuscular block and, awake state, H1084

pulmonary vasoregulation, pentobarbital anesthesia effects, H569
regulation of gastric function, gastrin-releasing peptide, G298
sympathetic activity, hypothalamic lesions, R507
time-dependent involvement, hyperglycemia, 2-deoxy-D-glucose and, E928

Autoradiography, thick ascending limb of Henle, innervation, F340

Autoregulation
cerebral
adenosine and, H1211
jugular venous pressure effects, H1516
elevated ambient oxygen, mesentery, H131
myogenic activity, coronary arterioles (pig), H1554
plasma dopamine, renal blood flow, R379
whole body, awake state, H44

AV node: *see* Atrioventricular node

AVP: *see* Vasopressin

Awake state
ACTH and vasopressin release, CRF and angiotensin II effects, E46
adrenoceptor antagonism, regional hemodynamic responses, H813
β-agonist hypotensive effects, long-term, H592
angiotensin antagonism, ACE inhibition and, F944
angiotensin II and renal nerve activities, during sodium deprivation, F823
arterial pressure, neurogenic and humoral factors, R693
support by major pressor systems, H483

Asynchrony, regional ventricular denervation and, H358

Blood flow
during exercise, muscle, H1509
postprandial celiac and superior mesenteric, G522
cardiac function, early hypertension, H1525
cardiac output measurement, Doppler flow probes, H1206
coronary occlusion, selective cardiac denervation effects, H525
dehydration, vasopressinergic antagonism during, awake state, R46
feeding and aging effects, glomerular filtration rate and proteinuria, F250
metabolic clearance of ANP, kidney, E934

Naloxone and circulatory changes, endotoxin shock, H1106

Plasma ACTH concentration, intravenous vasopressin effects, R665

Pulmonary vascular response, PAF (sheep), H434

Pulsatile sinus pressure changes, baroreflex responses and, H673

Saline loading, atrial resection and, H144

Sodium chloride intake, hydrogen homeostasis and body temperature during, R97

Vasoconstrictor effects of vasopressin, blockade after hemorrhage, H1325

Vasopressin change effects, urinary concentration, R940

Volume expansion, renal response to (monkey), R388

Axon, protein transport, motoneurons, exercise training and, C731

B

Bacteremia, protein clearance during, after surgery (sheep), H1421

Balloon, intraventricular, volume measurement, H394

Barium
block, whole-cell potassium currents, early distal tubule cells (frog), F699
decreased secretion, aging and, colon, G72

Paracellular pathway, cortical collecting duct, F720

Sodium-chloride transport and, urinary bladder (flounder), F229

Barium chloride, absorption, pH effects, intestine (flounder), G247

Basal metabolism, heart, potassium-chloride arrested, H807

Basolateral membrane: *see* Membrane BAY K 8644
hormone release and, pituitary tumor cells, E137
stimulation, prolactin release, C633

Behavior
CCK-opiate interactions and, neonate, R901
feeding
CCK-8 effects after pylorectomy or pyloroplasty, R113
CCK-8-induced changes, R21
low-dose fourth ventricular bombesin effects, R988
ingestive, postgastric controls, preweanlings, R191
MSH and interleukin interactions and, R914

Benzodiazepines, transport-related oxygen consumption and, thick ascending limb, C385

Betaine, accumulation, during dehydration, renal inner medulla, F626

Bethanechol
lower esophageal sphincter relaxation, on-line computer analysis, G794
smooth muscle cell contraction, colonic, G807

Bicarbonate
absorption, proximal, F434
chloride absorption and, intestine (flounder), G247

DIDS excretion and, biliary, G713

Drinking, inner medullary collecting duct, F307

Excretion
hypoxia and, awake state (sheep), R274
role in acid-base balance, F182
urinary, α_1 -adrenoceptor mediation of, F1116

Hypotonic volume regulation and, proximal straight tubules, F853

Intracellular pH and, skin (frog), F126

pH effects, proximal convoluted tubule, F301

Reabsorption
renal, carbon dioxide partial pressure, F349
sodium-hydrogen antiporter activity, F237

Secretion
collecting duct, fluorescent characterization of, F1003

Duodenal, basal and prostaglandin E₂-stimulated, G470

Bicarbonate (continued)
 duodenal, splanchnic nerve stimulation inhibition, G709
 gastric, reflex sympathetic activation and, G752
 transport, respiratory acidosis effects, collecting tubules, F656

Bile
 cyclic motor activity, G409
 flow, triacylglycerol secretion and, liver, E306
 formation, liver plasma membrane vesicles, G253

Bile acid, hydroxylation, biliary protoporphyrin excretion and, liver, G382

Bile duct, common, muscle cells, functional gradients from, G647

Bile salt, cotransport, hepatocyte microtubules, G121

Biliary excretion, taurocholate and bilirubin glucuronides, hepatocyte microtubules, G121

Biliary tract
 cyclic motor activity, G409
 muscle cells, functional gradients from, G647

Bilirubin, biliary secretion, lipid particles and, G745

Bilirubin glucuronides, taurocholate and, hepatocyte cotransport, G121

2,7-Biscarboxyethyl-5(6)-carboxyfluorescein, cell pH and sodium-hydrogen exchange, lens epithelium (toad), C595

Bladder: *see* Gallbladder; Urinary bladder

Bladder cells, intracellular calcium and sodium transport, vasopressin effects (toad), F1015

Blastocyst, transport functions, developing epithelium, embryo, C419

Blockade
 acetylcholine and nitric oxide, cerebral vasodilation, H847
 adrenergic
 acidosis-induced glucose intolerance and, E812
 glucose metabolism, endotoxin-induced increases in, E629
 β -adrenergic
 cardiovascular and sympathoadrenal responses and, mental stress, H1443
 circulation during carbon monoxide hypoxia, H77
 adrenoceptor, during exercise, R547
 atrioventricular, carotid sinus denervation, H910
 cholinergic, capsaicin excitation of adrenal nerve and, E23
 circulatory response to, chloralose effects (lamb), H419
 ganglionic, arterial pressure and, awake state, R693
 muscarinic, colonic transit, G529
 neurohumoral, pulmonary vasodilation and, awake state, H1084
 resistance to, saralasin, ACE inhibitors in sodium restriction, F944
 spinal pathways, pre- and postganglionic discharge and, R946
 vagal C-fiber, atrial natriuretic factor and, R6
 vasoconstrictor effects of vasopressin, after hemorrhage, awake state, H1325

Blood
 buffering, carbon dioxide partial pressure, renal cortex, F349

gas: *see* Gas
 oxygen content, estimation, H1545
 sample, transfusion protocol, R851
 transition from, changes in coronary pressure-flow relations, H476
 vasopressin and Met-Enk release in, hemorrhage effects, R731
 volume: *see* Volume

Blood-brain barrier
 indomethacin effects, interleukin 1- α -induced fever and, R527
 peripheral glucose and insulin penetration, cerebrospinal fluid, R200
 sodium appetite, angiotensin-related, thirst and (cow), R205

Blood flow: Circulation; Microcirculation autoregulation, pump perfusion effects via prostaglandin, H280
 β -blockade and, during carbon monoxide hypoxia, H77
 bone, parathyroid hormone effects, H94
 brain, hyperthermia effects, neonate (pig), H343
 bronchi, pulmonary and systemic circulation effects, H1130
 capillary pressure and, control during perfusion pressure, wing (bat), H1114
 cerebral
 interstitial fluid adenosine and, hemorrhagic hypotension, H1211
 jugular venous pressure effects, H1516
 middle artery occlusion, H623
 naloxone and, endotoxin shock, awake state, H1106
 neurohypophysis and hypothalamus, during hypercapnia, R295
 sympathetic regulation during seizures, newborn (lamb), H563
 chronic increase, endothelium-derived factor and, H446
 coronary
 dual control by α_2 -adrenoceptor activity, H250
 VIP receptors, desensitization, H601
 forearm, glucose metabolism and sodium-potassium exchange, insulin effects, E953
 gastric
 CNS regulation of, G298
 diabetes mellitus, glucagon role in, G542
 gastric mucosa, ulceration and injury, G395
 hepatic artery, continuous monitoring, G194
 intestinal, during sympathetic stimulation, H1091
 intrarenal, distribution, H1535
 jejunal, food-induced hyperemia, adenosine, G168
 large artery response, norepinephrine in hypertension, H36
 mesenteric, local control by renin-angiotensin system, G267
 metabolic changes, track sprint running (greyhound), R513
 muscle
 exercise and, awake state, H1509
 functional hyperemia (hamster), H236
 oxygen consumption, tension, and carbon dioxide tension relations, H1004
 vascularized skeletal grafts, H1043
 myocardial
 ischemia and afferent autonomic reflexes, H26

selective cardiac denervation and, awake state, H525
 organ, during endotoxic shock, naloxone and ibuprofen effects (pig), H177
 papillary, kinins and angiotensin II influence, F690

portal
 ethanol-induced, G417
 impaired thyroid hormone transport, obesity and, E54

pulmonary
 lymph flow during, H1149
 perfusion effects (lamb), H1336
 upper airways and, lung, H1130
 reduced, exercise, substrate exchange in muscle and, H1156

renal
 ACE inhibitors, sodium-restriction and, awake state, F944
 ANF and dopamine receptors, F494
 DOCA-salt hypertension, R563
 physiological dose of ANP and, F907
 plasma dopamine in regulation of, R379
 ureteral obstruction, renin-angiotensin system and, neonate (guinea pig), F1070

renal medulla, intrarenal adenosine effects, F1230

salt gland, blood flow and secretion (duck), R575

skin, oscillating heat flow, R464

spinal cord, ^{14}C -butanol measurement of, H953

superior mesenteric, postprandial celiac and, awake state, G522

Blood-nerve barrier, solute transfer across, compartmental analysis, R317

Blood pressure: *see also* Pressure
 aldosterone-vasopressin interactions, central, R166
 ANF dose response and pharmacokinetics, kidney, R929
 arginine vasopressin and, during dehydration, awake state, R46

arterial
 β -agonists effects, awake state, H592
 support by major pressor systems, awake state, H483
 awake state, CRF and angiotensin II effects, E46
 blood sample-transfusion protocol evaluation, R851
 hypertension, opioids and, E839
 mean arterial, area postrema stimulation and, R855

NE-ACTH hypertension, control of sodium excretion in, R894

physiological changes, during urethan anesthesia, R73

reflex summation, H1244

vasodepression, ANF-induced, H616

vasopressin blockade, after hemorrhage, awake state, H1325

venous volume and tone changes, forearm, H947

Blood vessels
 sodium-calcium exchange, mesenteric artery, C323
 venomotor responses, central and local hypoxia, H760

Body
 composition
 adrenalectomy effects on brown fat metabolism, E597
 androgenic influences (monkey), F557
 cimaterol effects, R952

SUBJECT INDEX TO VOLUME 255

fluid: *see* Fluid
 lean, growth, food restriction and adrenalectomy in, R787
 weight: *see* Weight

Bombesin
 gastrin and somatostatin release, stomach, G627
 intestinal motility, pancreatic secretion and, G498
 satiety action of, pylorectomy effects, R1059
 secretion, gastrinoma cells, G596

Bone
 blood flow: *see* Blood flow
 cortical extracts, aging effects, H101
 density, sex steroid effects, during growth, E416
 formation, skeletal unloading, glucocorticoids and, E875
 histomorphometry, changes after weightlessness, R243
 mineral content, verapamil effects, E702

Bowel, transit time, radiographic analysis, G633

Brachial artery, diameter, norepinephrine in hypertension and, H36

Bradycardia, during hypotension, R149

Bradykinin
 abnormal vascular reactivity induced by, H397
 afferent autonomic reflexes and, myocardial ischemia, H26
 calcium influx stimulated by, aortic endothelial cells, H219
 cytosolic free calcium and, proximal tubule cells, F486
 intrarenal, spinoreticular cell response to, R994
 renal hemodynamics and, F408

Brain
 anoxia
 evoked potential activity and (turtle), R478
 orthodromic field potentials (turtle), R485
 blood flow: *see* Blood flow, cerebral
 capillaries, stroke and, H623
 deep hypoglycemia, glucoreceptors in carotid perfused tissue, E680
 dialysis, hemorrhagic hypotension, H1211
 endogenous sugar acid depolarization, VMH neurons, R134
 injury, kinins and, H397
 ion composition, long-term anoxia effects, diving (turtle), R338
 ischemia and reperfusion, cerebral artery response, H879
 metabolic rate, hyperthermia effects, neonate (pig), H343
 nuclei
 DOCA-salt hypertension, angiotensin II receptors in, H646
 norepinephrine turnover, genetic hypertension, H729
 postischemic generation of superoxide anion, newborn, H401
 PTH-like reactivity (tetrapod vertebrates), R635, R643
 response to ventilation and oxygenation, fetus in utero (sheep), R1049
 sympathetic regulation, during seizures, newborn (lamb), H563
 temperature, MSH and interleukin interactions and, R914
 tissue, elastic behavior, R799

Brain cells, ketone body transport, C133

Brain stem
 auditory-evoked response, jugular venous pressure effects, H1516
 somata, controlling cardiac nodes, R703

BRL 26830A, insulin receptors and, obesity, E101

Bronchi, blood flow: *see* Blood flow

Bronchiolar epithelium, development, postnatal undernutrition effects, R521

Brown fat
 β -adrenoceptor subtypes and adenylate cyclase, glucocorticoid modulation of, E153
 composition, fasting-refeeding, repeated cycle effects, E120
 endotoxin-induced fever and, E617
 energy metabolism, cimaterol effects, R952

GDP binding sites, E865

insulin receptors, thermogenic agent effects, obesity, E101

lipoprotein lipase, high-fat diet and exercise effects, R226

melatonin effects, adults (hamster), R812

metabolism, adrenalectomy effects, glucose and, E597

nuclear T₃ receptor saturation, cold exposure and, E496

thermogenesis
 CRF effects, E255
 lateral hypothalamic lesions, E708
 trophic changes, neural influences, during cold acclimation, R874

Brush-border enzymes, growth and, small intestine, G813

Brush-border membrane
 adaptation to phosphate deprivation, pituitary involvement in, R373
 D-glucose transport, sodium-dependent, small intestine, G292
 intestinal, protein digestion, neutral endopeptidase effects, G212
 renal
 enzymatic and transport characteristics (snake), R52
 metabolic acidosis in senescence, F1183

Brush-border membrane vesicles
 foscarnet, phosphaturic action, F984

intestinal
 guanidine transport, G85
 sodium-dependent L-proline transport (eel), R648
 jejunal, sodium and hydrogen transport, G206

renal
 academia and sodium-hydrogen antiporter, F237
 carrier-mediated transport of pyroglutamyl-histidine, C822
 phosphate transport, nicotinamide effects, F15

Buccal mucosa, active electrolyte transport, G286

Bumetanide
 endolymph production and, semicircular canal (shark), F711
 membrane potential, parotid acini, C508
 sodium influx sensitive to, medullary vesicles, F1183
 sodium-potassium chloride cotransport, intestine (flounder), C246

2,3-Butanedione monoxime, stunned myocardium, H60

Butanol, ¹⁴C-labeled, distribution, spinal cord blood flow, H953

2-Buten-4-olide, endogenous, ventromedial hypothalamic neurons and, R134

Buthionine sulfoximine
 altered content, renal ischemic injury and, F911
 oxygen stress, renal proximal tubules, F874

t-Butyl hydroperoxide, toxicity induced by, renal proximal tubules, C28

C

Cachectin, tumor necrosis factor, metabolic effects, E206

Caerulein, amylase secretion and, pancreatic acini, G33

Calcitonin, oxytocin hydrostatic effect and, bladder (toad), E613

Calcitonin gene-related peptide, chronotropic effects, heart rate, H311

Calcium
 absorption, duodenal, verapamil effects, E702

ACh-induced transients, aortic endothelial cells, H1549

activation, potassium currents, pancreatic acinar cells (guinea pig), G275

active transport, renal, calcium-binding protein role in, F558

ANP-mediated excretion, renal ablation, F1091

ANP secretion and, cardiocytes, H405

binding capacity, cortical bone extracts, age-related changes, H101

brain and CSF composition, long-term anoxia effects, diving (turtle), R338

cellular compartmentation, ischemic myocardium, H929

cross-bridge cycling, smooth muscle, model, C86

cross-bridge phosphorylation and, smooth muscle (pig), C401

cytosolic, angiotensin II effects, glomerular cells, E338

cytosolic free
 bradykinin effects, proximal tubule cells, F486
 regulation in proximal tubules, F787

respiratory rate relations, myocytes, H347

determination with aequorin, cytoplasmic magnesium in platelets, H855

dynamics, myocyte deenergization and, C162

endotoxemia effects, coronary flow, H1295

flux, furosemide effects on insulin release, β -cells, E591

gastrin and somatostatin release, stomach, G627

homeostasis, PAF effects, PC-12 cell line, C559

hyperpolarization and, acetylcholine-stimulated endothelial cells, H965

influx
 adenosine effects, coronary artery, H1492

bradykinin-stimulated, aortic endothelial cells, H219

cation channel, activation by IGF II, BALB/c 3T3 cells, C442

intracellular
 mesangial cell growth and, F898

SUBJECT INDEX TO VOLUME 255

Calcium (continued)

transport, vasopressin effects, bladder cells (toad), F1015
intramitochondrial free, liver, C304
length dependence, smooth muscle contraction (swine), C473
luteinizing hormone release and, pituitary (calf), E469
metabolism
biologically active amino terminus, E886
renal, humor hypercalcemia of malignancy and, F1078
mobilization
mesangial cell contractions by AVP and, F142
neuropeptide Y and, erythroleukemia cells, E880
vasopressin-induced, glomerular mesangial cells, F771
myosin phosphorylation, smooth muscle contraction and, C719
regulatory mechanisms, smooth muscle (guinea pig), C465
respiratory acidosis and, bicarbonate transport, collecting tubules, F656
single adrenal glomerulosa cell response, external potassium, E488
skeletal exchangeable, parathyroid hormone effects, H94
subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
synthesis and secretion, parathyroid hormone and secretory protein I, E299
transport
basolateral membrane vesicles, small intestine, G482
transcellular, glucose enhancement of, intestine, G339
uptake
hydrogen-dependent, parotid gland, G429
leukotriene C₄ effects, taenia coli (guinea pig), C433
membrane vesicles, fura-2 monitoring of, C694
vascular α -adrenergic processes, streptozocin diabetes, H1036
Calcium-ATPase, uptake, membrane vesicles, fura-2 monitoring of, C694
Calcium-binding protein: *see* Protein
Calcium channels
cardiac, lipid bilayers, guanine nucleotide-binding proteins, H722
hormone release and, pituitary tumor cells, E137
voltage-dependent, renin release by neuronal norepinephrine, F614
Calcium chloride, ANP release and, E437
Calcium currents
antagonistic effects of adenosine, atrial cells (guinea pig), H872
antibody enhancement, myocytes, H960
hypertrophied ventricular myocytes, H1434
phenylephrine effects, ventricular myocytes, H1173
Calcium ion channels
renal vasoconstriction, adenosine receptor-induced, H885
voltage-sensitive, leukotriene C₄ effects, taenia coli (guinea pig), C433
Calcium ion currents, hormone release and, pituitary tumor cells, E137
Calcium ionophore, ANP secretion and, cardiocytes, H405

Calcium ions

cytoplasmic, diazoxide effects on insulin release, E422
dependence, carotid artery (pig), C393
intracellular activity
cardiac Purkinje fibers, C278
regulation of chloride transport, fibroblasts, C552
oxytocin and, bladder (toad), E613
Calcium oxalate, adherence, papillary epithelial cells, F1025
Calcium pool, agonist-sensitive, pancreatic acinar cells, G221, G229
Calmodulin
calcium pump regulated by, transport capacity (toad, pig), C226
cAMP production dependent on, limb of Henle and medullary collecting tubules, F834
gastrin and somatostatin release, stomach, G627
increased SR N-methylation, skeletal muscle, E347
respiratory acidosis and, bicarbonate transport, collecting tubules, F656
transport, basolateral membrane vesicles, small intestine, G482
Calmodulin antagonist, LH release, GnRH and secretagogue-induced (calf), E59
Calorimetry
indirect
regulation of energy stores, E332
thyroid hormones and, E146
cAMP: *see* Adenosine monophosphate, cyclic
Capillaries
filtration coefficient, lipid absorption, intestinal, G690
microvascular perfusion, cardiac hypertrophy, renal hypertension, H1384
recruitment, control during perfusion pressure, wing (bat), H1114
Capsaicin
catecholamine secretion excitation, adrenal sympathetic efferent nerve, E23 treatment, intestinal satiety and, R569
Captopril
angiotensin-related sodium appetite and (cow), R205
mean arterial blood pressure and, awake state, H483
regional hemodynamic effects, R737
renal response to amino acid infusion and, diabetic adults, F755
renin, angiotensinogen, and ANP mRNA levels, E129
thirst mechanisms, R217
Carbachol
agonist-sensitive calcium pool, pancreatic acinar cells, G221, G229
cAMP and, functional G_i protein, heart cells, C51
membrane potential, parotid acini, C508
Carbamoylcholine, inositol lipid turnover and, gastric parietal cells, G99
Carbidopa, inhibition, sodium-potassium-ATPase activity, cortical tubule cells, F666
Carbohydrates
appetite, flavor preference conditioning, R672
dietary, sympathetic nervous system responses, skeletal muscle, E180
feeding, very-low-density lipoprotein triglyceride kinetics and, E236

short-term energy balance relations, E332

Carbon dioxide
bicarbonate transport and, collecting tubules, F656
chloride absorption and, intestine (flounder), G247
partial pressure, variations, renal cortex, F349, F361
pressure, blood sample-transfusion protocol evaluation, R851
tension
blood flow relations, muscle, H1004
estimation of oxygen content in blood and, H1545
ventilation, osmolarity and sodium chloride dietary intake, R105
ventilatory response to, sympathectomy and deafferentation, R252
Carbonic anhydrase, collecting duct cells, fluorescent characterization of, F1003
Carbon monoxide
cardiac muscle cells and, C291
hypoxia, circulation during β -adrenergic blockade, H77
Cardiac ganglion, activity, H789
Cardiac output
 β -agonist effects, awake state, H592
arginine vasopressin and, during dehydration, awake state, R46
autoregulation, during hypotension, awake state, H44
carbon dioxide hypoxia, during β -adrenergic blockade, H77
low, hypoxanthine and lactate concentrations (lamb), H53
measurement with Doppler flow probes, awake state, H1206
 α -stimulation and blockade, after chloralose (lamb), H419
vasopressin blockade, after hemorrhage, awake state, H1325
Cardiocytes, atrial, proatrial natriuretic factor secretion, ouabain effects, E383
Cardiomyocytes: *see also* Heart cells; Myocytes: Ventricular cells
ANP secretion, role of calcium and protein kinase C in, H405
contractile force, ventricle muscle strip comparison (frog), H111
fast inward current, embryonic heart (chick), H540
Cardiovascular response
intravenous endothelin, awake state, R1064
mental stress, H1443
stress, borderline hypertension, R431
Carnitine, interaction, insulin-stimulated glucose metabolism, E946
Carnosine, dietary regulation of transport, intestinal, G143
Carotid artery
cross-bridge phosphorylation, strontium effects (pig), C401
occlusion, constriction of lymphatics, H514
pressure-induced contraction, endothium-induced, H783
Carotid sinus
baroreceptors: *see* Receptors
denervation, arterial pressure control after, H910
pressure: *see* Pressure

SUBJECT INDEX TO VOLUME 255

pulsatile pressure changes, baroreflex responses and, awake state, H673
 Carotid tissue, glucoreceptors, deep hypoglycemia and, E680
 Casein hydrolysate
 dietary regulation of transport, intestinal, G143
 regulatory signals for transport, intestinal, G151
 Catalase, endothelium-dependent relaxation and, diabetic aorta, H825
 Catecholaminergic system, stimulation of CRH secretion, E463
 Catecholamines
 acid secretion stimulated by, α_2 -receptor mediated, jejunum, G640
 arterial, changes in coronary occlusion, H704
 central, chronic sinoaortic denervation effects, R768
 constriction of lymphatics, H514
 CRF and, immune function, R744
 exercise-induced increment, metabolic role of, E428
 gastric functions, CNS regulation of, G298
 heart rate control, diabetes, E636
 hepatocyte response to (sheep), R539
 intestinal response, G18
 metabolism, iron deficiency, temperature effects, R90
 microdialysis, adipose tissue and blood in lipolysis studies, E737
 oxygen consumption and, forearm, E572
 plasma, cardiac hypertrophy, H452
 pulmonary vascular reactivity, acute hypoxia, H329
 release, acidic stress and (trout), R395
 secretion, excitation by capsaicin, E23
 stimulation of CRH secretion, E463
 Cathepsin G, neutrophil, permeability and, type II pneumocytes, C603
 Cations
 intracellular activity, oxytocin effects, skin epithelium (frog), C357
 organic, transport, potential-driven, proximal tubules (flounder), R492
 transport, glucocorticoid-induced, sialoglucocorticoid effects, colon, F1235
 Cation channel, calcium-permeable, activation by IGF II, BALB/c 3T3 cells, C442
 Cation-proton antiport, organic, intestinal brush-border membrane vesicles, G85
 Caudal artery, endothelium-independent increases in cAMP, acetate and, H1378
 CCK: *see* Cholecystokinin
 CCK-8: *see* Cholecystokinin octapeptide
 Celiac ganglia, neuron activation, fast synaptic cholinergic, G759
 Cell: *see also* specific cell
 swelling, hyposmotic, ADH and, medullary thick ascending limb, F962
 uncoupling, protein kinase C and, C699
 video microscopy, Nomarski and fluorescence imaging during, C566
 volume: *see* Volume
 Cellular metabolism, insulin action and, C1
 Cellulose, colonic transit time and, radiographic analysis, G633
 Central nervous system
 adrenal nerve excitation, capsaicin and, E23
 contributions, hyperglycemia, E920

deep hypoglycemia, glucoreceptors in carotid perfused tissue, E680
 interactions, vasopressin and aldosterone, R166
 regulation of gastric and autonomic functions, gastrin-releasing peptide, G298
 vasodepression, ANF-induced, H616
 vasopressin and catecholamines, chronic sinoaortic denervation effects, R768
 Centrifugation, equilibrium density gradient, renal renin granules, E353
 Cerebral artery
 occlusion, microvascular morphometry during, H623
 response after ischemia, reperfusion and, H879
 Cerebral ventricles
 anteroventral, inhibition of paraventricular neurons, R961
 fourth, low-dose bombesin and food intake, R988
 Cerebrospinal fluid
 ion composition, long-term anoxia effects, diving (turtle), R338
 peripheral glucose and insulin penetration, R200
 physiological changes, during urethan anesthesia, R73
 vasopressin and Met-Enk release in, hemorrhage effects, R731
 Cervical ganglia, norepinephrine turnover, genetic hypertension, H736
 cGMP: *see* Guanosine monophosphate, cyclic
 Charybdotoxin, membrane potential, parotid acini, C508
 Chemosensitivity, central, ventral medulla, R780
 Chenodeoxycholate, hydroxylated, protoporphyrin excretion and, liver, G382
 Chloralose, circulatory response and, α -receptor stimulation and blockade (lamb), H419
 Chloride
 absorption, pH effects, intestine (flounder), G247
 balance, potassium-depletion alkalosis, F763
 brain and CSF composition, long-term anoxia effects, diving (turtle), R338
 conductive transport, regulation, fibroblasts, C552
 flux
 furosemide effects on insulin release, β -cells, E591
 sugar-stimulated, vertebrates and invertebrates, R583
 hypotonic volume regulation and, proximal straight tubules, F853
 intracellular activity, proximal straight tubules, F49
 loop segment reabsorption, insulin effects, F1206
 paracellular pathway, cortical collecting duct, F720
 pump: *see* Pump
 transport
 adrenergic receptors in, corneal epithelium (frog), C724
 cortical collecting duct, F220
 is there a pump?, R677
 placental microvillous membranes, fluorescence measurement, C789
 transport pathways, fibroblasts, C112
 uptake, DIDS excretion, G713
 Chloride-bicarbonate antiport
 intracellular pH, skin (frog), F126
 lacrimal gland, G367
 norepinephrine effects, intestine, G18
 sodium-dependent, pH regulation, glomerular mesangial cells, C857
 Chloride channel, basolateral, peritubular hypertonicity effects, F1128
 Chloride ion channel, hydrogen ion transport, renal cortical endosomes, F885
 Chlorine, subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
 Chlorophenylalanine, renal sympathoinhibition, during severe hemorrhage, H496
 Chloroquine, cellular processing of CCK-8 and, pancreatic acinar cells, G738
 Cholecystokinin
 agonist-sensitive calcium pool, pancreatic acinar cells, G221, G229
 binding, pancreatic acini (guinea pig), G106
 cellular processing, pancreatic acinar cells, G738
 gastric motility and emptying, capsaicin-sensitive vagal pathway, G242
 G protein in, pancreatic acinar cells, E652
 gradient in muscle cells, biliary tract, G647
 independent ingestion and, neonate, R14
 intestinal motility, pancreatic secretion and, G498
 metabolism, endopeptidase 24.11 and, stomach (pig), G676
 opiate interactions, behavioral evidence, neonate, R901
 ornithine decarboxylase gene expression and, pancreatic, G818
 receptors: *see* Receptors
 responses and mechanics, proximal and distal colon, G787
 satiety action of, pylorectomy effects, R1059
 somatostatin release and, D-cells, G424
 vagal gastric mechanoreceptors, G55
 Cholecystokinin antagonist
 action, gastric emptying and, G685
 characterization of, G261
 Cholecystokinin octapeptide
 binding, pancreatic acini (guinea pig), G106
 cellular processing, pancreatic acinar cells, G738
 changes induced by, gastric emptying and feeding, R21
 food intake and gastric emptying with, after pylorectomy or pyloroplasty, R113
 gastric emptying, opiates and, G158
 Cholesterol
 composition, hormone effects, testes, E442
 metabolism
 acetyl-CoA hydrolase activity relations, R724
 regulation in aorta, fetus, H160
 Cholesteryl ester, transfer protein, high-density lipoprotein regulation of lipids, E894
 Choline, TEA transport and, renal tubules (snake), F167
 Cholinergic inhibition, pertussis toxin-sensitive, D-cells, G424

Cholinergic innervation, excitatory, portal and mesenteric veins, H288

Cholinesterase, excitatory innervation, portal and mesenteric veins, H288

Chorda tympani nerve, sodium-chloride taste response, residual, R1002

Chromatography
high-performance liquid, intracellular pathways of insulin transport (calf), C459

lectin affinity, clearance of glycosylated α -amylase, G374

Chromosomal walking, inborn errors, physiological processes revealed through, F1047

Chymotrypsin
inactivation of lipase, G476

treatment, pancreatic enzyme secretion and, G236

Cimaterol, energy metabolism and, R952

Cinefluorography, biplane, linear transformation and ellipsoid models, H197

Circadian clock, protein synthesis phase shifts, inhibitor of (hamster), R1055

Circadian rhythm: *see* Rhythm

Circulation: *see also* Blood flow;
Microcirculation
cerebral
arginine vasopressin effects, H70

postischemic generation of superoxide anion, H401

coronary, pulmonary inflation reflex and, H866

enterohepatic, gallbladder cyclic motor activity, G409

extracorporeal, pump perfusion effects, H280

hepatic, new method of portal vein cannulation, G191

intestinal, arterial hypoxia and isoproterenol effects (swine), H1144

peripheral, central and local hypoxia, H760

pulmonary
after chloralose (lamb), H419

biogenic amines in acute hypoxia, H329

combined neurohumoral block and, awake state, H1084

pentobarbital anesthesia effects, H569

splanchnic, awake state, G522

vasodilatory therapy effects, pulmonary hypertension, model, H1232

Citrate
excretion, role in acid-base balance, F182

reabsorption, pH effects, proximal convoluted tubule, F301

Clearance, renal, ANP, E934

Coenzyme A, DHEA treatment and, obesity, E1

Colchicine, antidiuretic response and, urinary bladder (frog), F1098

Cold
acclimation, tropic changes in brown fat during, R874

enhanced pressor response, spontaneous hypertension, H1018

exposure
brown fat nuclear T_3 receptors, E496

lateral hypothalamic lesions, E708

sympathetic nervous system responses, skeletal muscle, E180

Collagen, synthesis and degradation, during compensatory lung growth, C754

Collagenase, renal, protease effects on adenylyl cyclase, F1033

Colon
contractile activity, high-amplitude propagated, G660

decreased secretion, aging and, G72

distal
electrolyte transport, sodium depletion and, G329

synaptic behavior of myenteric neurons (guinea pig), G184

glucocorticoid-induced cation transport, spironolactone effects, F1235

growth, neurotensin stimulation of, G813

proximal
electrical slow waves of, membrane potential effects, C828

intestinal anaphylaxis, G201

response to neuropeptides, regional differences, G787

restitution of function, after acute mucosal injury (pig), G62

smooth muscle cell contraction, prostaglandin E_2 effects, G807

transit, quantitative measurement, G529

transit time, dietary fiber effects, G633

Colonic cell, prostaglandin E_2 responses, protein kinase C effects, G27

Compartmental analysis, solute transfer, across blood-nerve barrier, R317

Compartmental, cellular, ischemic myocardium, H929

Computer analysis
lower esophageal sphincter relaxation, G794

simulation, hormone secretion, pulse-detection algorithms, E775

steady-state, pancreatic islet discrimination, hexose isomers, E189, E201

Copper, plasma, poly I:C effects, R748

Cordycepin, modulation of sodium-inorganic phosphate cotransport and, kidney cells, C155

Corneal epithelium, chloride transport, adrenergic receptors in (frog), C724

Coronary arterioles, subepicardial and subendothelial, myogenic activity in (pig), H1554

Coronary artery
adrenergic vasoconstriction, receptor subtype distribution and (calf), H1452

α_2 -adrenoceptor activity, dual control of blood flow, H250

calcium influx, adenosine effects, H1492

calcium pumps, superoxide radical effects, C297

constriction, flow-mediated attenuation, H1317

diameter, flow-mediated attenuation, H1317

dilation, carotid chemoreceptor stimulation, H1330

flow
development effects (guinea pig), H1460

intramyocardial pressure and, model, H664

occlusion
changes in adrenal sympathetic nerve activity and arterial catecholamines, H704

neutrophil accumulation and, H1060

reperfusion and, myocardial neutrophil accumulation, H1188

selective cardiac denervation effects, awake state, H525

serotonergic responsiveness, inhibitors of cyclooxygenase and, H1023

Coronary resistance bed, endothelium-dependent dilation, free radical inhibition of, H765

Coronary veins, nutritional capacity, pressure-flow relations, H834

Corticosterone
ACTH release, CRF infusion effects, E213

circadian variation in response, CRF-41 and AVP, E265

inhibition, ACTH, E241

mirex-induced adaptive liver growth, hepatocytes and, G132

obesity effects, adrenocortical cells, E229

release, lymphokines and ACTH, R839

secretion, adrenal gland changes during aging, E903

sodium transport and, A6 cells, F736

Corticotropin-releasing factor
activation, autonomic nervous system, R744

angiotensin II effects and, ACTH and vasopressin release, awake state, E46

chronic intracerebroventricular, ACTH-corticosterone release and, E213

circadian variation in response to, E265

glucocorticoid feedback, corticotrope, E241

intake, brown fat thermogenesis and, E255

plasma concentration, vasopressin infusion effects, awake state, R665

secretion, regulation by glucose, E287

Corticotropin-releasing hormone, secretion, central catecholaminergic system and, E463

Cortisol
action, amino acid kinetics and, E366

β -adrenergic mechanisms and, insulin action, E33

exercise-induced increment, metabolic role of, E428

inhibition, ACTH, E241

maternal, ACTH and renin secretion and, fetal (sheep), R412

plasma concentration, vasopressin infusion effects, awake state, R665

secretion, drinking and, during dehydration (pig), R249

vasopressin effects, adrenal steroidogenesis, R806

Coupling
activation-contraction, myosin phosphorylation, smooth muscle, C719

aortic-ventricular, aortic input impedance, model, H742

electrical
colonic smooth muscle, C653

gap junctional channels, heart cells, neonate, H770

excitation-contraction, prostaglandin E_2 effects, colon, G807

stimulus-secretion
lacrimal gland, G367

parotid acini, C508

Creatine, extraction, physiological dose of ANP and, F907

Creatine phosphate
intracellular pH and, myocardial, H189

myocardial respiratory control, H185

CRF: *see* Corticotropin-releasing factor

CRH: *see* Corticotropin-releasing hormone

SUBJECT INDEX TO VOLUME 255

Cross-bridge cycling, regulation of shortening velocity, smooth muscle, model, C86

Crown ether, potassium-selective microelectrodes, C408

Crystal

absorption, urine inhibition, F1197
binding, papillary epithelial cells, F1025

Cuneate nucleus, dorsal medulla, microinjection of ANF, cardiovascular responses, R182

Current

fast inward, ventricular cells, embryo (chick), H540
short-circuit, corticosterone's metabolite and, A6 cells, F736
slow inward, acetylcholine in AV node, H7

Cushing's syndrome, potassium regulation, aldosterone role in, F811

Cycloheximide

gastric mucosal, gastrin effects, G305
nicotinamide and phosphate transport, renal brush-border membrane, F15

Cyclooxygenase

inhibition, serotonin permeability and, lung, H1096
inhibitors of, serotonergic responsiveness in coronary artery and, H1032

pathway inhibition, pulmonary vasoconstriction and, awake state, H1084

Cyclooxygenase metabolites, organ blood flow and, endotoxic shock (pig), H177

Cyproheptadine, pump perfusion, autoregulation and, H280

Cystic duct, muscle cells, functional gradients from, G647

Cytoclasin B, apical membrane responses to ADH and, urinary bladder (toad), C526

Cytochrome P-450

inhibition of oxygen responses, cheek pouch arterioles (hamster), H711
renal, arachidonate metabolism related to, aortic coarctation, F151

Cytokines, enhancement of slow-wave sleep, R748

Cytoprotection, gastric ulceration and injury, model, G395

Cytosol, renal, growth hormone and prolactin receptors in, E293

Cytotoxicity, natural killer, CRF effects, R744

D

D-Cells, somatostatin release from, cholinergic inhibition, G424

Deconvolution technique, numerical, hydrocortisone secretion (horse), E688

Deferoxamine, acute renal failure and, F539

Defibrillation, ventricular, unsuccessful, epicardial activation after, H902

Dehydration

accumulation of major organic osmolytes, renal inner medulla, F626
adrenergic control of renin in, awake state, E793

angiotensin II levels, during drinking, R500
arginine vasopressin during, awake state, R46

glycerol-induced renal failure, F438
locally mediated vasodilation and, hind-limb (baboon), H266

phosphate metabolites and, renal, NMR studies of, F581
rehydration and, maternal (sheep), E674

Dehydroepiandrosterone, short-term administration, liver metabolism, obesity, E1
Dehydrogenase, activity, activation of, cardiac respiration and, H185

Deoxycholate

acute mucosal injury with, restitution of colonic function after (pig), G62
hydroxylated, protoporphyrin excretion and, liver, G382

Deoxycorticosterone acetate, peritubular potassium increase, cortical collecting tubules, F108

Deoxyglucose, metabolism, insulin effects, E806

2-Deoxyglucose

paratrigeminal nucleus, entrance to hibernation (squirrel), R178
uptake, melatonin effects, suprachiasmatic nucleus, R332

2-Deoxy-D-glucose

hyperglycemia due to, autonomic nervous system in, E928
metabolic control of feeding and, R82
regulation of CRF secretion, E287

Deoxyribonucleic acid

gene transfer mediated by, mammalian potassium channel, C12
synthesis, parathyroid hormone and, osteoblasts, E9

Deuterium, presence in water, measurement by infrared absorbance, R175

Development: *see also* Growth; Maturation
bacterial endotoxin, pituitary-adrenal response to, E525

brain, ketone body transport, C133
bronchiolar epithelium, postnatal under-nutrition effects, R521

changes in tubular capacity, phosphate reabsorption, F278

infant, maternal photoperiodic history and (vole), R831

postgastric controls, feeding behavior, preweanlings, R191

postnatal intestinal circulation, arterial hypoxia and isoproterenol effects (swine), H1144

stomach, CCK effects on satiety, neonate, R14

Dexamethasone

cation transport induced by, spironolactone effects, colon, F1235
differentiation and, A6 cells, C661

glutamine synthetase expression and, skeletal muscle, E397

hypertension reversal and, one-kidney, one-clip hypertension, H717
secretion, adrenal gland changes during aging, E903

Dextran, clearance, acute renal failure, F257

DHEA: *see* Dehydroepiandrosterone

Diabetes
captopril effects, renal response to amino acid infusion, F755

cholesterol metabolism, acetyl-CoA hydrolase activity relations, R724
endothelium-dependent relaxation of aorta, oxygen free radical effects, H825

heart rate control in, E636

increased SR phospholipid N-methylation, skeletal muscle, E347

neuroeffector system, vascular α -adrenergic, H1036

neurotide synthesis and, glomerular, F647

satiating effects of fat, R123
somatic growth and, food restriction effects, adrenalectomy and, R787

Diabetes mellitus

insulin-like growth factor I receptors, renal glomeruli and tubules, E504
insulin release, furosemide effects, β -cells, E591

insulin resistance of, sialic acid role in, E173

intestinal hyperemia associated with, glucagon role in, G542

Diacylglycerol

orally fed, absorption and metabolism, G612

phosphoinositide hydrolysis, LLC-PK₁ cells, C502

PTH effects, osteoblast-like cell line, E660

Diacylglycerol kinase inhibitor R59022, stimulated neutrophil response and, C589

Diaphragm, sodium-potassium-ATPase isozymes, thyroid hormone, E912

Diazoxide, glucose inhibition of insulin release and, E422

Dibenzo-18-crown-6, potassium-selective microelectrodes, C408

Dicarboxylic acid, respiration, membrane potential, and potassium, proximal tubule, F1170

DIDS: *see* Diisothiocyanostilbene disulfonate

Dietary fiber, colon transit time and, radiographic analysis, G633

Diethylmalate, oxygen stress and, renal proximal tubules, F874

Diethylstilbestrol, biliary secretion, lipid particles and, G745

Diet: *see* Feeding

Difluoromethylornithine
compensatory growth and, renal, F270
gastric mucosal, gastrin effects, G305

Dihydrotestosterone, body size and composition and, adult (monkey), E857

Diisothiocyanostilbene disulfonate
biliary excretion, bicarbonate effects, G713

chloride transport and, fibroblasts, C552

Dimaprit, gastric emptying and (monkey), G767

Dimethyl sulfoxide, metallothionein response, stress, liver, E518

Dimethylthiourea, glycerol-induced renal failure and, F438

Dipeptides

carrier-mediated transport, renal brush-border membrane vesicles, C822
transport, proximal straight tubules, F177

1,3-Dipropyl-8-p-sulphophenylxanthine, adenosine and noradrenergic neurotransmission, H386

Dithiothreitol, cellular processing of CCK-8 and, pancreatic acinar cells, G738

Diuresis

α_2 -adrenoceptor agonist-induced, F317
ANF secretion, renal responses, F936
low-dose ANP infusion and, anesthesia, R449

pressure, NE-ACTH hypertension and, R894

Diuresis (*continued*)
 renal nerves, volume expansion and (monkey), R388
 salt adaptation, ANF and (fish), F1281
 Diving, long-term anoxia, brain and CSF ion composition (turtle), 338
 DNA: *see* Deoxyribonucleic acid
 L-Dopa, inhibition, sodium-potassium-ATPase activity, cortical tubule cells, F666
 Dopamine
 locally formed, inhibition of sodium-potassium-ATPase activity, cortical tubule cells, F666
 plasma, regulation in renal blood flow, R379
 receptors: *see* Receptors
 release, PAF effects, PC-12 cell line, C559
 Doppler system, large artery response, nor epinephrine in hypertension, H36
 Dorsal medulla, microinjection of ANF, cardiovascular responses, R182
 Doxazosin, cold-induced vasoconstriction and, finger skin, H1000
 Drinking
 controlled, hydrogen homeostasis, osmolarity, and body temperature during, R97
 cortisol and vasopressin secretion, during dehydration (pig), R249
 during angiotensin II intravenous infusion, plasma angiotensin II levels, R500
 response to angiotensin II, paraventricular nucleus lesion effects, R882
 sodium appetite and, angiotensin-related (cow), R205
 thirst mechanisms, R217
 Duodenum
 bicarbonate secretion
 basal and prostaglandin E₂ stimulation of, G470
 splanchnic nerve stimulation and, G709
 calcium absorption, verapamil effects, E702
 field stimulation, opioid receptors, G352
 norepinephrine turnover, genetic hypertension, H736
 proximal, emptying of liquid meals, G93

E

Edema, postburn, negative interstitial fluid pressure and, H1069
 EEG: *see* Electroencephalography
 Eicosanoid
 excretion, urinary, leg exercise and, H15
 release, superoxide dismutase effects, necrotizing enterocolitis, G556
 transmembrane signaling, leukotriene receptors, C771
 Ejection fraction, ventricular, linear transformation and ellipsoid models, H197
 Elastic parameters, brain, R799
 Electrical slow waves, membrane potential effects, proximal colon, C828
 Electroencephalography
 analysis of non-REM sleep, R27
 MSH and interleukin interactions, effects on sleep, behavior, and brain temperature, R914
 Electrolytes
 cellular compartmentation, ischemic myocardium, H929

responses to hypoxia, awake state (sheep), R274
 secretion, lacrimal gland, G367
 sodium chloride dietary intake, regulation of carbon dioxide ventilation and, R105
 subcellular, shifts, myocardial ischemia and reperfusion, H917
 transport
 buccal mucosa, G286
 ileal, leukotrienes in, G175
 radioisotope flux measurements, G696
 sodium depletion effects, distal colon, G329
 Electromechanical activity, leukotriene C₄ effects, *taenia coli* (guinea pig), C433
 Electroosmosis, cell membrane water permeabilities, streaming currents and, proximal tubules (salamander), F188
 Electrophoresis, myosin heavy chains, cardiac, separation, H659
 Electrophysiology
 calcium currents, hypertrophied ventricular myocytes, H1434
 conduction pathway through AV node, computer algorithm for modeling transmission, H1247
 cultured epithelial cells, sweat gland, C102
 fast synaptic cholinergic activation of neurons, celiac ganglia, G759
 glutathione efflux, membrane potential difference and, liver, G547
 sex differences in membrane potential, liver, G822
 sodium chloride taste response, residual, R1002
 Embryo
 developing epithelium, blastocyst transport functions, C419
 ventricular cells, fast inward current (chick), H540
 Embryogenesis, excitatory cholinergic innervation, H288
 Endocrine glands, episodic signaling, general biophysical model, E749
 Endocrine response, intravenous endothelin, awake state, R1064
 Endocytosis
 fluorescent characterization, collecting duct cells, F1003
 ouabain uptake by, atria (guinea pig), C479
 protein metabolism, renal tubular, F520
 Endolymph, secretion, semicircular canals (shark), F711
 Endoneurium, solute transfer, compartmental analysis, R317
 Endopeptidase 24.11, gastrin and CCK metabolism by, stomach (pig), G676
 Endopeptidases, neutral, protein digestion in small intestine and, G212
 Endoplasmic reticulum, parotid gland, hydrogen-dependent calcium uptake, G429
 Endosomes
 intracellular fate, liver, C70
 renal cortical, hydrogen ion transport, F885
 Endothelial cells
 acetylcholine-stimulated, hyperpolarization and increased free calcium in, H965

aortic
 ACh-induced calcium transients in, H1549
 calcium influx, bradykinin stimulated, H219
 GTP_S loading, phospholipase C and ATP receptors, C667
 stimulation of proliferation, adenosine and hypoxia in, H554
 water permeability, temperature effects (calf), C311
 Endothelial injury, vascular reactivity and, monocrotaline pulmonary hypertension, H1484
 Endothelin
 cardiovascular, renal, and endocrine response, awake state, R1064
 vasoconstrictor peptide, inotropic action of, atria (guinea pig), H970
 Endothelium-derived relaxing factor
 angiotensin II-induced vasodilation, aorta (fowl), R591
 arterial smooth muscle, H207
 bioassay of, H1259
 calcium transients, ACh-induced, H1549
 dilation in coronary resistance bed, oxygen free radical inhibition, H765
 enhanced release, blood flow increase and, H446
 independent blockade, cerebral vasodilation, H847
 pressure-induced contraction, carotid arteries, H783
 red cell velocity, contracting muscle and (hamster), H236
 Endoxemias, myocardial metabolism and coronary flow with, H1295
 Endotoxin
 bacterial, pituitary-adrenal response to, during growth, E525
 corticosterone-releasing effects and, R839
 fever induced by, sympathetic nervous system and brown fat effects, E617
 increases in glucose metabolism, adrenergic blockade effects, E629
 protein synthesis, muscle glutamine and, E166
 Energy
 balance
 adrenalectomy, starch and glucose effects, R141
 fasting-refeeding cycle effects, E120
 short-term, regulation, E332
 expenditure, measurement of water by infrared absorbance, R175
 metabolism
 cimaterol effects, R952
 during circulatory occlusion, skeletal muscle, C140
 interleukin 1 and tumor necrosis factor role, E760
 liver (hummingbird), R699
 myocyte deenergization, calcium dynamics and, C162
 thyroid hormones and, E146
 regulation, acceleration by group housing, R128
 retention, adrenalectomy effects on brown fat metabolism, E597
 storage, proximal artery, pressure-flow loop area and, H1405
 utilization, meal frequency effects, R616
 Enkephalinase, gastrin and CCK metabolism by, stomach (pig), G676

SUBJECT INDEX TO VOLUME 255

Enteric nervous system
neuropeptide responses, colon, G787
serotonin receptor localization, G603
synaptic behavior, distal colon (guinea pig), G184

Enterocolitis, necrotizing, eicosanoid release, superoxide dismutase effects, G556

Enterocytes, succinate transport and metabolism, sodium effects, C95

Enterogastrone, somatostatin and neuropeptides, C40

Enterotoxin, *E. coli*, receptors and cGMP signalling mechanism in, kidney (opossum), F1040

Enzymes: *see also* specific enzyme
liver (hummingbird), R699

Epidermal growth factor
ontogenesis of, liver, E28
renal tubular cells, F1191
vascular smooth muscle cells and (horse), C447

Epinephrine
adrenal medullary secretion, excitation by capsaicin, E23
 β -adrenergic mechanisms and, insulin action, E33
adrenergic stimulation and, ANP release, E260
arterial, changes in coronary occlusion, H704
cAMP and, obesity, pancreatic islets, E833
excretion, during leg exercise, H15
exercise-induced increment, metabolic role of, E428
glucose intolerance and, thyrotoxicosis, E843
glucose metabolism and, endotoxemia, E629
hyperglycemia, CNS-mediated, E920
infusion, intravenous glucose tolerance and, E668
intravenous endothelin effects, awake state, R1064
plasma renin activity and, awake state, E793
platelet activation and, H1276
somatostatin release and, D-cells, G424
turnover, genetic hypertension, H729, H736

vagal activity, hypotensive lower-body negative pressure effects, R149

Epineurium, solute transfer, compartmental analysis, R317

Epithelial cells
gallbladder, apical membrane, potassium conductance (guinea pig), C808
monolayers, oxidants and conductance of, C781
renal, PDGF-like protein secretion (monkey), F800
sweat gland, different physiological signatures, C102
tracheal
differentiated properties, C760
growth and function, hormone effects, C237

Epoxy-eicosatrienoic acid, histamine stimulation of, endothelial cells, C214

Erythrocytes
ghosts, potassium transport, C346
intracellular pH and inorganic phosphate content, heart, H189

potassium-rubidium fluxes in, ouabain resistance (sheep), C331
thermoregulation and blood volume, exercise-heat stress, R456
velocity, during functional hyperemia (hamster), H236

volume regulatory response, intracellular signals and (skate), R982

Erythrocythemia, polycythemia and thermoregulation, exercise-heat stress, R456

Erythroleukemia cells, adenylate cyclase in, neuropeptide Y mobilizes calcium, E880

Erythron, transferrin-iron receptor relations, R326

Esophageal sphincter
lower
relaxation, computer analysis, G794
response to distension (opossum), G587
neural control, G441

Esophagus
ion absorption, sugar-stimulated, vertebrates and invertebrates, R583
responses, transient and sustained distension (opossum), G587

Estradiol, angiotensinogen synthesis and, hepatocytes, E70

17 β -Estradiol, LH response and, arachidonic acid and protein kinase C, E314

Estrogen, bone density and, during growth, E416

Estrous cycle
melatonin entrainment, activity rhythms and, female, R237
vasopressin secretion during, R1041

Ethanol
portal blood flow increase and, G417
vasoaction, gastric submucosa, arachidonic acid effects, G731

Ethylisopropylamiloride
pH regulation, glomerular mesangial cells, C844, C857
sensitivity to, sodium-hydrogen exchange and, LLC-PK₁ mutant, C495

N-Ethylmaleimide
internal anal sphincter relaxation, G571
potassium transport and, erythrocyte ghosts, C346

Eucapnia, hormonal and electrolyte responses to, awake state (sheep), R274

Euglycemia, loop segment chloride reabsorption, insulin and, F1206

Euglycemic clamp, glucose kinetics during, isotope infusion effects, E871

Euvhydration, adrenergic control of renin in, awake state, E793

Exercise
blood flow in muscle during, awake state, H1509
epinephrine increment induced by, metabolic role of, E428
forearm, lactic acid generation, systemic pH effects, F479
heat stress, thermoregulation and blood volume, R456
high-fat diet and, lipoprotein lipase in white and brown fat, R226
intensity, MDA content and, skeletal muscle, C874
isometric contraction, head production, anococcygeus muscle, C536

leg, prostacyclin and thromboxane A₂ metabolite excretion during, H15
regulation, triiodothyronine metabolism, E824

reproductive quiescence and, exogenous melatonin-induced (hamster), R718

running
glucose production, metabolic feed-back regulation in, R400
muscle and blood metabolic changes (greyhound), R513
muscle composition and (lizard), R470
muscular glucose clearance, E456
subcellular binding of glycolytic enzymes, muscle (fish), R289

substrate exchange during, limb muscle, H1156

training, baroreflex regulation of nerve activity and, H974

treadmill running, liver fructose 2,6-bisphosphate in, R38

venomotor responses, central and local hypoxia, H760

Exocytosis, granule swelling, osmotic forces and, F1

Exotoxins, bacterial, endothelial permeability and, C368

Extensor digitorum longus muscle, sodium-potassium transport, thyroid hormone effects, E604

F

Fasting
adrenalectomy and, denervated muscle, E850
diet effects, sympathetic nervous system responses, skeletal muscle, E180
food intake and, sympathetic activity, R284
glutamine concentration, protein synthesis relations, muscle, E166

GnRH sensitivity, prepubertal females, E482

lactate production, regional, adipocytes, E716

refeeding and, repeated cycle effects on brown fat composition, E120

Fat
balances, short-term energy balance relations, E332
body, melatonin and, adults (hamster), R812, R823
epididymal, development, thyroid status and, E280
satiating effects of, diabetes, R123

Fat cells: *see* Adipocytes

Fatty acid intermediates, mechanical recovery during reflow and, heart (swine), H169

Fatty acids
composition, hormone effects, testes, E442
free
epinephrine in exercise, E428
exercise at reduced blood flow, limb muscle, H1156
orally fed, absorption and metabolism, G612
prolonged hypothermia and, R1035
oxidation
myocardial, H441
reversal of stunning, heart (swine), H169

secretin release, small intestine, G7

Fatty acids (*continued*)
 synthesis
 adrenalectomized obese mice, R141
 liver (hummingbird), R699
 volatile, cAMP and, caudal artery, H1378

Feedback
 metabolic, role in glucose production, running and, R400
 negative inhibition, fetal ACTH and renin, maternal cortisol effects (sheep), R412
 tubuloglomerular
 adenosine analogue effects, F33
 peritubular infusion of angiotensin and, F383
 renal function, diabetic adults, F755

Feeding
 aging and, glomerular filtration rate and proteinuria, awake state, F250
 antral gastrin release, after a meal, G665
 appetite, sodium, strain differences, R424
 body size and composition, androgenic influences (monkey), E857
 brown fat thermogenesis and, CRF effects, E255
 CCK action, pylorectomy effects, R1059
 CCK-8 effects, after pylorectomy or pyloroplasty, R113
 CCK properties, vagal gastrin mechanoreceptors, G55
 conditioned flavor preference, intragastric starch infusion and, R672
 diet
 adrenalectomy and, denervated muscle, E850
 regulation of carnosine transport, intestinal, G143
 sympathetic nervous system responses, skeletal muscle, E180
 endogenous sugar acid effects, ventromedial hypothalamic neurons and, R134
 energy balance and, adrenalectomized obese mice, R141
 fasting-refeeding repeated cycles, brown fat composition and, E120
 fat
 satiating effects, diabetes, R123
 test meals, gastric emptying, endogenous opiate involvement, G158
 food deprivation, voluntary sodium intake and, R1025
 food intake regulation, CSF glucose and insulin penetration, R200
 gastric emptying and, CCK-8-induced changes, R21
 hedonic food intake, voluntary sodium intake and, R1025
 high-carbohydrate diet, energy metabolism and, R952
 high-fat diet
 energy metabolism and, R952
 exercise and, lipoprotein lipase in fat, R226
 3-OHB and insulin effects on obesity, model, R974
 independent ingestion, CCK effects, neonate, R14
 liquid meals, gastric emptying of, antropyloroduodenal activity in, G93
 low-dose bombesin effects on food intake, fourth ventricle, R988
 low-iodine diet, circadian period and (hamster), R1

maternal influences, offspring development (vole), R831
 meal frequency, energy utilization and, R616
 melatonin and
 long-day responses and short-day housing (hamster), R823
 short-day responses (hamster), R812
 metabolic control, after 2-deoxy-D-glucose and nicotinic acid injection, R82

nutrient and nonnutritive meals, jejunal motor patterns after, G800
 oral, linoleic and arachidonic acid metabolism, G612
 postgastric controls, preweanlings, R191
 restriction, somatic growth and diabetes, adrenalectomy and, R787
 sham, intestinal nutrient-induced, capsaicin effects, R569
 sodium appetite
 angiotensin related (cow), R205
 pregnancy and lactation effects, R1020
 soya flour, pancreatic growth after partial resection, G670
 starvation and, sympathetic activity, R284
 taste transduction, spatial map of salts and saccharides, tongue, R117
 underfeeding, GnRH sensitivity, prepubertal females, E482
 undernutrition, postnatal, bronchiolar epithelium development and, R521

Femoral arteries
 flow-induced enhanced relaxation, acetylcholine, H446
 vascular mechanics, intramural lymphostasis and, H1289

Febnoldopam, ANF and dopamine receptor effects, renal, F494

Fetus: *see also* Lactation; Placenta; Pregnancy
 ACTH and renin, maternal cortisol effects (sheep), R412
 β -adrenoceptor responses, maturation of (lamb), R794
 cholesterol metabolism, aorta, H160
 glucose kinetics, somatostatin and glucose infusion effects (sheep), E87
 glycogen precursors (sheep), E743
 mature and immature, hormonal responses to hypotension (lamb), R67
 plasma and urinary responses, maternal dehydration and rehydration (sheep), E674
 renal function, maternal hyperglycemia effects (sheep), F11
 SV40-transformed hepatocytes, growth-dependent regulation of system A in, C261
 urine flow, vascular volume expansion and (sheep), R846
 ventilation and oxygenation, in utero response, cerebral (sheep), R1049

Fever
 endotoxin-induced, sympathetic nervous system and brown fat effects, E617
 interleukin 1- α -induced, indomethacin effects, R527
 MSH and interleukin interactions and, R914
 sleep and, muramyl-dipeptide-induced, R157
 thermoregulation and, changes during urethan anesthesia, R73

Fibrillation, atrial, low potassium and, H1359
 Fibrinogen, platelet, receptor exposure, H651
 Fibroblasts
 cardiac, nonrandom turnover of actin and tubulin, C202
 chloride transport pathways, C112
 regulation of, C552
 Fibronectin, clearance, during bacteremia after surgery (sheep), H1421

Filtration
 glomerular
 β -agonist effects, awake state, H592
 amino acid and hormone level effects, F444
 angiotensin II receptors, E16
 ANP and volume expansion, F66
 changes, vasotocin-induced antidiuresis (kelp gull), R936
 during sodium deprivation, F823
 kinins and, F408
 metabolic clearance of ANP, E934
 physiological dose of ANP and, F907
 pressure natriuresis during hypertension, R756
 proteinuria and, feeding and aging effects, awake state, F250
 protein, kidney (trout), R418

Flow
 coronary, effects of LTC₄ and TXA₂, H153
 rate, ammonia loss and, proximal tubule, F861

Flowmetry, laser-Doppler, blood flow and secretion of salt glands, VIP effects (duck), R575

Fluid
 amniotic: *see* Amniotic fluid
 body, volume, age-related changes, hypertension, F953
 cerebrospinal: *see* Cerebrospinal fluid
 extracellular, antioxidant properties of, allopurinol effects, H202
 filtration
 lung, perfusion effects (lamb), H1336
 microvessel, cyclooxygenase-inhibited lung, H1096
 redistribution, hyperosmotic resuscitation, H629
 secretion, lacrimal gland, G367
 subcutaneous interstitial, ion concentrations in, F513

Fluorescence
 lipid order, MDCK cells, F22
 measurement of chloride transport, placental microvillous membrane, C789
 Nomarski and, video microscopy of cells, C566

Follicle-stimulating hormone
 GnRH sensitivity, underfeeding and, prepubertal females, E482
 melatonin and, adults (hamster), R812, R823

Polypolyglutamate, intestinal absorption, analysis of sequential events, G361

Food intake: *see* Feeding

N-Formyl-methionyl-leucyl-phenylalanine, superoxide dismutase and, necrotizing enterocolitis, G556

Forskolin
 calcium-activated potassium channels and, aortic smooth muscle cells, H754

SUBJECT INDEX TO VOLUME 255

chloride transport and, corneal epithelium (frog), C724
 DNA synthesis and pH depression, osteoblasts, E9
 postnatal maturation, papillary muscle, H335
 VIP receptors and, desensitization, heart, H601
 Freeze-fracture study, myocardial sarclemma, ischemia, H467
 Freshwater, catecholamine release, acidotic stress and (trout), R395
Fructose
 glutathione efflux and, hepatocytes, G403
 kinetics, carbohydrate feeding and, E236
Fructose 2,6-bisphosphate, hepatic, treadmill running and, R38
Fucose, terminal residues, clearance of glycosylated α -amylase, G374
 α -Fucosidase, clearance of glycosylated α -amylase, G374
Fura-2
 adenosine and intracellular calcium, cortical collecting tubule cells, C581
 bradykinin action, proximal tubule, F486
 conversion, liver mitochondria, C304
 cytosolic calcium and, glomerulosa cells, E338
 differential interference contrast, fluorescence imaging and, cells, C566
 measurement of calcium influx, aortic endothelial cells, H219
 monitoring of calcium uptake, membrane vesicles, C694
 vasopressin action, calcium transport, bladder cells (toad), F1015
Furosemide
 active ammonium absorption, thick ascending limb, F57
 adaptation to sodium delivery and, distal tubule and collecting duct adaptation to, F1256, F1269
 benzodiazepine effects and, oxygen consumption, thick ascending limb, C385
 hypotonic volume regulation and, proximal straight tubules, F853
 insulin release and, β -cells, E591
 intracellular chloride activity and, proximal straight tubule, F49
 sodium-hydrogen exchange and, renal cells (opossum), C76

G

GABA: *see* γ -Aminobutyric acid
Gallbladder
 CCK receptor, labeling using probes, G579
 cyclic motor activity, G409
 muscle cells, functional gradients from, G647
 muscularis smooth muscle cells, culture behavior, G653
 pancreatic acinar cells and, CCK receptors on, G512
Gas
 blood
 during urethan anesthesia, R73
 evaluation of sample, R851
Gastric acid
 formation, stimulation by valinomycin, permeable gastric glands, G313
 secretion
 CNS regulation of, G298

histamine receptor stimulation (monkey), G767
 immunoneutralization effects, G40
Gastric antrum
 antropyloroduodenal activity, emptying of liquid meals, G93
 gastrin release, after a meal, G665
 neurokinin effects, G779
Gastric distension
 blood flow, awake state, G522
 passive, physiological enteric stimulation, G319
Gastric emptying
 capsaicin-sensitive vagal pathway, cholecystokinin effects, G242
 CCK antagonist effects, G685
 CCK-8 effects, R21
 after pyloromyotomy or pyloroplasty, R113
 CNS regulation of, G298
 histamine receptor stimulation (monkey), G767
 liquid meals, antropyloroduodenal activity in, G93
 regulation, endogenous opiate involvement, G158
 satiating effects of fat, diabetes, R123
Gastric glands, permeable, valinomycin stimulation of acid, G313
Gastric mucosa
 epithelial injury, G395
 injury, restitution of colonic function after (pig), G62
 ornithine decarboxylase, gastrin effects, G305
 protection, prostaglandin metabolite effects, G723
Gastric nerve, unequal bulbospinal influences on, R946
Gastric secretion, endopeptidase 24.11 and, stomach (pig), G676
Gastric submucosa, ethanol vasoaction in, arachidonic acid metabolite effects, G731
Gastric ulceration, model, G395
Gastrin
 antral, release after a meal, G665
 inositol lipid turnover and, gastric parietal cells, G99
 intestinal motility, pancreatic secretion and, G498
 localization, ornithine decarboxylase, gastric mucosa, G305
 metabolism, endopeptidase 24.11 and, stomach (pig), G676
 release, calcium and bombesin in, stomach, G627
 secretion, gastrinoma cells, G596
Gastrinoma cells, gastrin secretion, G596
Gastrin-releasing peptide, regulation, gastric and autonomic functions, G298
Gastrocnemius muscle, blood flow: *see* Blood flow, muscle
Gastroduodenal mucosa, necrosis, paraventricular nucleus stimulation and, R861
Gastrointestinal hormones, responses and mechanics, proximal and distal colon, G787
Gastrointestinal tract
 transit time, radiographic analysis, G633
 ulceration, prostaglandin metabolite effects, G723
GDP: *see* Guanosine diphosphate
Gene expression
 ANF, cardiac tissue, perinatal, E388
 ANF, sodium intake effects, H245
 ornithine decarboxylase, CCK effects, pancreas, G818
 renin, structure, F563
Gene transfer, potassium channel, mammalian, C12
Gentamicin, nephrotoxicity, microsomal protein synthesis inhibition, F265
Gestation, hypotension across, hormonal responses, fetus (lamb), R67
GHRH: *see* Growth hormone-releasing hormone
Gizzard, motility, denervation effects (turkey), G1
Glomerular epithelial cells
 growth inhibition, heparin and, F781
 heparin sulfate proteoglycan protein content, puromycin aminonucleoside effects, F590
Glomerulosa cells, angiotensin II, cytosolic calcium elevation and, E338
Glomerulosclerosis, diabetes and protein intake effects, nucleotide synthesis, F647
Glucagon
 β -adrenergic mechanisms and, insulin action, E33
 glucose intolerance and, thyrotoxicosis, E843
 hepatic fructose 2,6-bisphosphate and, treadmill exercise, R38
 hepatocyte response to (sheep), R539
 hyperglycemia, CNS-mediated, E920
 insulin secretion stimulated by, ANF effects, E579
 intestinal hyperemia and, diabetes mellitus, G542
 production, metabolic feedback regulation of, R400
 secretion, nonadrenergic sympathetic neural influences, E785
Glucocorticoids
 angiotensinogen synthesis and, hepatocytes, E70
 bone formation inhibition, skeletal unloading and, E875
 cation transport induced by, spironolactone effects, colon, F1235
 feedback
 corticotrope, E241
 inhibition of ACTH, R344
 glutamine synthetase expression and, skeletal muscle, E397
 hypertension reversal and, one-kidney, one-clip hypertension, H717
Glucokinase, pancreatic islet discrimination of, computer simulation, E189, E201
Gluconate
 hypotonic volume regulation and, proximal straight tubules, F853
 intracellular pH and, skin (frog), F126
Gluconeogenesis
 alanine effects, renal metabolism, R42
 hepatic, treadmill running and, R38
 liver (hummingbird), R699
 parathyroid hormone effects, renal proximal tubular segments, F847
 precursors to glycogen, fetus (sheep), E743
Glucoregulation
 exercise, epinephrine role in, E428
 hyperglycemia, CNS-mediated, E920
Glucose
 adrenalectomy, brown fat metabolism and, E597

SUBJECT INDEX TO VOLUME 255

Glucose (continued)
 energy balance and, adrenalectomized obese mice, R141
 enhancement of calcium transport, intestinal, G339
 exercise at reduced blood flow, limb muscle, H1156
 hyperglycemia, maternal, fetal renal function and (sheep), F11
 inhibition of insulin, diazoxide effects, E422
 insulin secretion stimulated by, ANF effects, E579
 intercellular level, subcutaneous tissue, microdialysis of, E218
 intolerance
 acidosis-induced, adrenergic blockade effects, E812
 thyrotoxicosis, E843
 kinetics
 carbohydrate feeding and, E236
 isotope infusion effects, euglycemic clamp, E871
 somatostatin and glucose infusion effects, fetus (sheep), E87
 lactate production from, adipocytes, regional differences, E716
 metabolic control of feeding, R82
 metabolism
 endotoxin-induced, adrenergic blockade effects, E629
 insulin effects, E806
 insulin-stimulated, carnitine interaction with, E946
 muscle, physical inactivity and, E456
 oxidative and nonoxidative, thyroid hormone effects, E146
 sensitivity to insulin, circadian rhythm and, muscle, E41
 stimulation by insulin, E953
 triacylglycerol secretion and, liver, E306
 muscle, euglycemic hyperinsulinemia, E942
 pancreatic islet discrimination of, computer simulation, E189
 penetration, cerebrospinal fluid, R200
 plasma, prolonged hypothermia and, R1035
 precursors, fetus (sheep), E743
 production
 β -adrenergic mechanisms, E33
 metabolic feedback regulation of, R400
 regulation of CRF secretion, E287
 renal hemodynamics and, F444
 specificity, cellular ATP and, nephron, F977
 starvation, trehalase expression after, kidney cells (pig), C816
 sympathetic activity, hypothalamic lesions, R507
 taste transduction, tongue, R117
 tolerance, epinephrine infusion effects, E668
 transport
 hormone-stimulated, phenylarsine oxide and denervation effects, E159
 muscle insulin resistance and, obesity, E374
 renal, humor hypercalcemia of malignancy and, F1078
 soleus axon function and, insulin effects, C60
 uptake
 non-insulin- and insulin-mediated, tissue sites, E769

prolonged insulin stimulation and, muscle, E621
 D-Glucose, sodium-dependent transport, proximal small intestine resection, G292
 Glucose 1,6-bisphosphate
 after isometric contraction, skeletal muscle, C145
 during circulatory occlusion, skeletal muscle, C140
 L-Glutamate, parabrachial stimulation, pressor response and, H1349
 Glutamine
 ammoniagenesis and, renal proximal tubular segments, F847
 concentration, protein synthesis relations, skeletal muscle, E166
 physiological hypercortisolemia effects, E366
 specificity, cellular ATP and, nephron, F977
 Glutamine synthetase, expression, dexamethasone effects, skeletal muscle, E397
 Glutaric acid, *p*-aminohippurate transport and, renal basolateral membrane vesicles, F597
 Glutathione
 altered content, renal ischemic injury and, F911
 efflux
 hepatic, membrane potential difference in, G547
 membrane potential and cellular ATP effects, hepatocytes, G403
 exogenous oxidant injury and, proximal tubules, F874
 metabolism, α -adrenergic modulation of, hepatocytes, E801
 transport, liver plasma membrane vesicles, G253
 Glutathione disulfide, oxidative injury, renal proximal tubules, C28
 Glyceraldehyde-3-phosphate dehydrogenase, kinetics, renal epithelial cell growth, F868
 Glycerination, smooth muscle, myosin phosphorylation and, C34
 Glycerol
 microdialysis, adipose tissue and blood, E737
 renal failure induced by, hydroxyl radical role in, F438
 α -Glycerophosphate dehydrogenase, tibialis anterior motor units, C43
 Glycerophosphorylcholine
 accumulation, during dehydration, renal inner medulla, F626
 survey, renal cell lines, C181
 Glycogen
 blood flow during exercise, muscle, H1509
 depilation
 soleus motor units, C684
 tibialis anterior motor units, C43
 metabolic changes, track sprint running (greyhound), R513
 precursors, fetus (sheep), E743
 storage, during insulin stimulation, muscle, E621
 synthesis, sensitivity to insulin, circadian rhythm and, muscle, E41
 Glycogenolysis
 hepatic, treadmill running and, R38
 production, metabolic feedback regulation of, R400
 Glycogen phosphorylase, hormone effects, hepatocytes (sheep), R539
 Glycogen synthase, insulin resistance, muscle, obesity and, E374
 Glycolysis
 during circulatory occlusion, skeletal muscle, C140
 organ-specific control, anoxia and (turkey), R774
 Glycolytic enzymes, subcellular binding, muscle (fish), R289
 Glycoprotein IIIa, granulocyte elastase interaction, platelets, H651
 Glycosaminoglycans, epithelial cell growth inhibition, glomerular visceral, F781
 Glycosylation, hepatic clearance, renal renin, E642
 Glycylsarcosine, active transport, proximal straight tubules, F177
 GnRH: *see* Gonadotropin-releasing hormone
 Gold thioglucose, sympathetic activity, hypothalamic lesions, R507
 Gonadotropin
 human chorionic, testes lipid composition and, E442
 oocyte meiosis and (goldfish), R268
 Gonadotropin-releasing hormone
 calcium and sodium effects on LH release, pituitary (calf), E469
 hypothalamic, alterations over normal menstrual cycle, E696
 LH release induced by, calmodulin antagonist effects (calf), E59
 oocyte meiosis and (goldfish), R268
 sensitivity, starvation and, prepubertal females, E482
 G protein, PI hydrolysis and, pancreatic acinar cells, E652
 G protein, changes in expression, cultured heart cells, C51
 Granules, swelling, exocytosis and, F1
 Granulocytes, xanthine oxidase and, ischemia-reperfusion injury, H1269
 Granulocyte elastase, platelet interactions, H651
 Growth: *see also* Development; Maturation androgenic influences, adult (monkey), E857
 cardiac muscle cells, carbon monoxide effects, C291
 compensatory
 lung, perioperative hypoxemia and, E65
 ornithine decarboxylase activity and, renal, F270
 gastric mucosal, gastrin effects, G305
 glomerular, nucleotide metabolism, F635
 inhibition, crystal absorption and, F1197
 mirex-induced adaptive, liver, hepatocytes and, G132
 neurotensin stimulation, small intestine, G813
 obesity and, acceleration by group housing, R128
 regulation
 kidney, insulin-like growth factor I receptors, E504
 PDGF-like protein secretion (monkey), F800
 protein degradation, cardiac fibroblasts, C202
 sex steroid effects, bone density, E416
 somatic, food restriction effects, adrenalectomy and, R787

SUBJECT INDEX TO VOLUME 255

tracheal epithelial cells, hormone effects, C237

Growth factors
hormone effects, tracheal epithelial cells, C237

mesangial cells, F674

Growth hormone
amino acid level and, renal hemodynamics, F444

binding proteins for, kidney cytosol, E293

muscle hypertrophy stimulated by, IGF-I and -II gene expression, E513

status, white adipose tissue development and, E280

stimulation, 3-O-methylglucose transport, E723

Growth hormone cell, calcium channels, hormone release and, E137

Growth hormone-releasing factor, sleep enhancement, R310

Growth hormone-releasing hormone, biphasic stimulation, SRIF secretion, hypothalamic cells, E829

GTP γ S, loading, endothelial cells, phospholipase C and, C667

Guaniidine, transport, intestinal brush-border membrane vesicles, G85

Guanosine diphosphate binding, brown fat, E865

trophic changes in brown fat, cold acclimation, R874

Guanosine monophosphate, cyclic
ANF vasodilatory action and, glomerular afferent arterioles, F415

blunted response to ANF, spontaneous hypertension, vascular smooth muscle cells, C573

hydraulic conductivity and, cortical collecting tubules, F841

mediator of inhibition, renin release, F474

signalling mechanism, *E. coli* enterotoxin, kidney (opossum), F1040

sodium chloride permeability and, inner medullary collecting duct, F421

spontaneous hypertension, vascular smooth muscle cells, C169

urinary, biological marker of renal activity of ANF, F1220

vasopressin-induced calcium mobilization, glomerular mesangial cells, F771

Guanylate cyclase
hydraulic conductivity and, cortical collecting tubules, F841

internal anal sphincter relaxation, G571

Guar, colonic transit time and, radiographic analysis, G633

Gustatory response
behavioral response, sodium chloride, R424

sodium chloride, after amiloride, R1002

Gut: *see* Intestine

H

Haber-Weiss reaction, xanthine oxidase and granulocytes, ischemia-reperfusion injury, H1269

Heart
adrenalectomy effects, brown fat metabolism, glucose feeding and, E597

adult vs. immature, metabolic hyperemia (guinea pig), H1460

arrested, changes in coronary pressure-flow relations, H476

baroreflex properties, differentiation, R654

cardiac channels, lipid bilayers, guanine nucleotide-binding proteins, H722

catheterization, responses to mental stress, H1443

contractile function, responses to ruthenium red (frog), H1413

contractile tissue, differential sympathetic regulation, H1050

denervation
carotid stimulation, coronary dilation and, H1330

differential sympathetic regulation, H1050

direct effects of vasopressin, H261

dorsal medulla, pressor responses, R709

endothelial lipoprotein lipase, metabolic fate of, E247

endotoxemia effects, metabolism and coronary flow, H1295

energetics, oxygen consumption-pressure volume area relations, H366

energy-depleted normoxic, sustained function, C192

failure, L-thyroxine treatment, H801

fatty acyl-coenzyme A oxidase, properties and subcellular localization, H441

hypertrophy: *see* Hypertrophy

innervation, cardiac output measurement with Doppler flow probes, H1206

intracellular pH, inorganic phosphate content and, H189

isolation of translation-inhibiting peptides, H1024

left ventricular filling, hypoxia and reoxygenation effects, H1311

mapping
unsuccessful defibrillation shocks and, H902

ventricular arrhythmias and, H891

mass increase, evaluation, H587

mechanical recovery during reflow, L-propionylcarnitine effects (swine), H169

mitochondria, chronic hypobaric hypoxia, C123

myosin heavy chains, separation, H659

norepinephrine turnover, genetic hypertension, H736

plexus neurons, activity, H789

potassium-chloride arrested, oxygen consumption in, H807

protein synthesis, acute inhibition, β -adrenergic stimulation or hypoxia, E537

Purkinje fibers, contractility, sodium-calcium exchange in, C278

respiration, activation of dehydrogenase activity and, H185

sarcolemmal sodium-calcium exchange, oocytes (toad), C870

selective denervation, response to coronary occlusion, awake state, H525

tissue, ANF gene expression, perinatal, E388

ventricular cells, fast inward current, embryo (chick), H540

ventrolateral medulla, pressor responses, R709

VIP receptors, desensitization, H601

volume-overloaded, estimation of left ventricular wall volume in, H1399

Heart atria
activation, baroreflex modulation of heart rate and, H503

ANP secretion, methacholine inhibition of, H1429

cells, lidocaine exposure, recovery kinetics (frog), H1558

distension
natriuresis during, plasma atriopeptin and, R259

release of ANF and, isolated heart, R232

low pot. ssium, reentrant and focal arrhythmias in, H1359

ouabain uptake, endocytosis (guinea pig), C479

rate, differential sympathetic regulation, H1050

resection, saline loading in, awake state, H144

right, pulmonary artery flow and (pig), H228

vasoconstrictor peptide endothelin, inotropic action of (guinea pig), H970

Heart cells: *see also* Cardiomyocytes;
Myocytes; Ventricular cells

contractile force, ventricle muscle strip comparison (frog), H111

functional G_i protein, changes in expression, C51

inside-out patch-clamp recording, H980

primary culture, attachment and maintenance, C19

single gap junctional channels, neonate, H770

Heart rate
area postrema stimulation and, R855

arginine vasopressin and, during dehydration, awake state, R46

arterial pressure control, after carotid sinus denervation, H910

awake state, CRF and angiotensin II effects, E46

baroreflex modulation, atrial activation and, H503

control
brain stem somata, R703

diabetes, E636

neuropeptide effects, H311

physiological changes, during urethan anesthesia, R73

plasma ACTH concentration, vasopressin infusion effects, awake state, R665

responses, maturation of, fetus (lamb), R794

right atrial contraction, pulmonary artery flow and (pig), H228

venous volume and tone changes, forearm, H947

Heart ventricles
arrhythmias, induction, shock strength and timing effects, H891

defibrillation, unsuccessful, epicardial activation after, H902

ejection fraction, linear transformation and ellipsoid models, H197

electrophysiology, time course of sympathetic denervation supersensitivity, H577

function, after acute ischemic injury, H85

muscle strips, comparison with heart cell contractile force (frog), H111

SUBJECT INDEX TO VOLUME 255

Heart ventricles (*continued*)
 optimal external power or efficiency, H1263
 pericardial pressure, regional variation, H1370
 postischemic recovery, amiloride effects, H608
 refractoriness, hysteresis in, H1342
 size, evaluation, H587

Heart ventricles, left
 augmented function, early hypertension, awake state, H1525
 denervation, asynchrony with, awake state, H358
 end-systolic pressure-volume, pressure-wall thickness relations, model, H679
 filling, hypoxia and reoxygenation effects, H1311
 function, pulmonary artery flow and (pig), H228
 hypertrophy, volume-overloaded heart, H1399
 rate of relaxation, separation from chamber stiffness, H1468
 systolic wall, pressure-thickness isochrones, H1136
 volume measurement, balloon method, H394

Heart ventricles, right
 hypertrophy, pulmonary hypertension and, H1165
 protein synthesis, efficiency in pressure overload cardiac hypertrophy, H325

Heat
 oscillating flow, pinna, R464
 production
 isometric contraction, anococcygeus muscle, C536
 lateral hypothalamic lesions, E708

Heating, contralateral hand, forearm oxygen consumption and, E572

Hematocrit
 blood sample-transfusion protocol evaluation, R851
 vasopressin, drinking and, during dehydration (pig), R249

Hemin, aerobic capacity and, skeletal myotubes, C519

Hemoglobin
 bioassay of endothelium-derived relaxing factor, H1259
 oxygen content, blood, H1545
 renal failure induced by, F539

Hemorrhage
 blood sample-transfusion protocol evaluation, R851
 constriction of lymphatics, H514
 hypovolemic, hyperosmotic resuscitation of, fluid redistribution, H629
 mesenteric blood flow, local control by renin-angiotensin system, G267
 severe, serotonergic mechanisms during, H496
 vasopressin and Met-Enk releases and, blood and CSF, R731
 vasopressin blockade after, awake state, H1325

Henle's loop
 amino acid transport, juxtamedullary nephrons, F397
 ammonium absorption, potassium effects, F78
 chloride reabsorption, insulin effects, F1206
 medullary collecting tubules and, cAMP production, calmodulin dependence of, F834

structure, countercurrent multiplier system (bird), F500
 thick ascending limb
 innervation, F340
 protein kinase, ADH effects, F292
 renal arachidonic acid metabolism, hypertension and, F151

Heparin
 epithelial cell growth inhibition, glomerular visceral, F781
 metabolic fate of lipoprotein lipase and, heart, E247

Heparin sulfate proteoglycan, puromycin aminonucleoside effects, glomerular epithelial cells, F590

Hepatic artery, hemodynamics, continuous monitoring, G194

Hepatic nerve, unequal bulbospinal influences on, R946

Hepatocytes
 angiotensinogen mRNA accumulation, regulation of, E70
 autoradiographic analysis, adaptive liver growth, G132
 ATP-depleted, cell death in, extracellular acidosis effects, C315
 cotransport, taurocholate and bilirubin glucuronides, G121
 DIDS excretion, bicarbonate effects, G713
 fluorescent angiotensin II probe, development, C452
 glucagon and catecholamine effects (sheep), R539
 glutathione flux from, membrane potential and cellular ATP effects, G403
 glutathione metabolism, α -adrenergic modulation of, E801
 inactivation of amino acid transport, PCMBS, C340
 sialic acid effects, diabetes mellitus, E173
 sodium-proton exchanger in, G346
 SV40-transformed, growth-dependent regulation of system A in, C261
 tight junctional permeability, hormonal regulation of, G454

Hepatoma cells, inactivation of amino acid transport, PCMBS, C340

Heptanot, electrical coupling and, colonic smooth muscle, C653

HETE: *see* Monohydroxyeicosatetraenoic acid

Hexamethonium, mean arterial blood pressure and, awake state, H483

N,N'-Hexamethylene-bis-acetamide, trehalase expression after, proximal tubule cells (pig), C816

Hexokinase, muscle, obesity and, E374

Hexose transport
 stimulation, growth hormone, E723
 transcellular, glucose enhancement of, intestine, G339

Hibernation
 entrance to, paratrigeminal nucleus during (squirrel), R178
 neuronal activity during (squirrel), R1008

Hindbrain, low-dose bombesin, food intake and, R988

Histamine
 pulmonary artery responses, C3a, H1227
 receptors: *see* Receptors
 stimulation of PGs and HETE synthesis, endothelial cells, C214

Histidine, vasopressin action and, urinary bladder (toad), F685

Homocysteine, methionine cycle, quantitative study, E322

Hormonal regulation, tight junctional permeability, hepatocyte, G454

Hormonal responses
 hypotension, mature and immature fetus (lamb), R67
 hypoxia, awake state (sheep), R274
 recombinant human tumor necrosis factor, E206

Hormones: *see also* specific hormone growth and function, tracheal epithelial cells, C237
 levels, renal hemodynamics and, F444
 pulsatile secretion, computer simulation, E775
 release, episodic endocrine gland, model, E749

Horseradish peroxidase, biliary permeability, hormonal regulation of, G454

Humoral factors, arterial pressure, awake state, R693

Hydralazine, vasodilatory therapy effects, pulmonary hypertension, model, H1232

Hydration
 phosphate metabolites and, renal, NMR studies of, F581
 polycythemia and, exercise-heat stress, R456

Hydrochloric acid, secretion, valinomycin and, gastric glands, G313

Hydrochlorothiazide
 sodium-chloride absorption and, proximal tubule, F461
 sodium-chloride transport and, urinary bladder (flounder), F229

Hydrocortisone
 impaired thyroid hormone transport, obesity and, E54
 secretion, numerical deconvolution (horse), E688

Hydrogen
 calcium uptake dependent on, parotid gland, G429
 chloride-dependent ATP-driven transport, renal cortical endosomes, F885
 clearance, adenosine and cerebral auto-regulation, H1211
 homeostasis, during sodium chloride and water intake, R97
 transport
 jejunal brush-border membrane vesicles, G206
 papillary collecting duct cells, F331

Hydrogen ions
 cotransport, renal brush-border membrane vesicles, C822
 excretion, norepinephrine and, intestine, G18

Hydrogen peroxide
 endothelium-dependent relaxation and, diabetic aorta, H825
 granulocytes and, ischemia-reperfusion injury, H1269
 papillary muscle tension and, H138

Hydrogen-TEA exchange, choline effects, TEA transport, renal tubules (snake), F167

Hydrolase, DHEA treatment and, obesity, E1

Hydronephrosis, relief of, renin-angiotensin system response, neonate (guinea pig), F1070

3-Hydroxybutyrate
 intracerebroventricular infusions, dietary obesity model, R974
 transport, brain cells, C133

SUBJECT INDEX TO VOLUME 255

β -Hydroxybutyrate, specificity, cellular ATP and, nephron, F977

Hydroxycorticosterone, sodium transport and, A6 cells, F736

6-Hydroxydopamine
stimulation of CRH secretion, E463
vasodepression induced by ANF and, central nervous system, H616

12-Hydroxy-heptadecatrienoic acid, histamine stimulation of, endothelial cells, C214

Hydroxyl radical
glycerol-induced acute renal failure and, F438
granulocytes and, ischemia-reperfusion injury, H1269

5-Hydroxytryptamine: *see* Serotonin

Hypercalcemia
humor, of malignancy, renal phosphate transport in, F1078
ouabain and, ANP release, E437
parathyroid effects, exchangeable calcium and blood flow, bone, H94

Hypercapnia
neurohypophysis and hypothalamus, blood flow, R295
respiration during, carotid sympathectomy and deafferentation, R252

Hypercarbia, acidification adaptation, inner medullary collecting duct, F1155

Hypercholesterolemia, thromboxane antagonism effects, H318

Hypercortisolemia, physiological, amino acid kinetics, E366

Hyperemia
blood flow during exercise, muscle, H1509
exercise, blood flow relations, muscle, H1004
functional, red cell velocity during (hamster), H236
intestinal, glucagon role in, diabetes mellitus, G542
jejunal, food-induced, adenosine effects, G168
metabolic, heart (guinea pig), H1460
postprandial, awake state, G522
reactive
adenosine-induced coronary vasodilation, H250
sympathetic tone and vascular resistance, H937

Hyperglycemia
CNS-mediated, nervous system and hormone contributions, E920
2-deoxy-D-glucose, autonomic nervous system in, E928
maternal, fetal renal function and (sheep), F11

Hyperinsulinemia, euglycemic, muscle glucose during, E942

Hyperosmotic resuscitation, fluid redistribution in, H629

Hyperplasia
pancreatic growth, after partial resection, G670
renal, ornithine decarboxylase activity and, F270

Hyperpolarization
endothelium-dependent, arterial smooth muscle, H207
increased free calcium and, acetylcholine-stimulated endothelial cells, H965

Hypersensitivity
antigen-induced contraction, jejunal smooth muscle, G701

immediate, motility and anaphylaxis, intestinal, G505

Hypertaurinuria, decreased taurine transport, renal basolateral membrane, F88

Hypertension
angiotensin II activity, pituitary cell aggregates, R407
arachidonic acid metabolism and, renal, F151
ATP-sensitive potassium channels, hypertrophied ventricular myocytes, H1254
body fluid volume, age-related changes, F953
borderline, stress responses, R431
DOCA-salt
angiotensin II receptors, brain nuclei, H646
renal hemodynamics and vascular reactivity in, R563
early, cardiac function in, awake state, H1525
essential, ANP role in saline loading, F1085
genetic
norepinephrine turnover, H729, H736
ventricular size and, H587
glomerular, renal ablation in nephrosis, F1243
naloxone attenuation of, E839
NE-ACTH, control of sodium excretion in, R894
norepinephrine in, response of large artery diameter, H36
one-kidney, one-clip, dexamethasone reversal of, H717
opiates, modulation of baroreflexes, H987
pial arteriolar responses to, trigeminalectomy effects, H1
portal, new method of portal vein cannulation, G191
pressure natriuresis in, renal interstitial hydrostatic pressure during, R756
pulmonary
monocrotaline, endothelial injury in, H1484
monocrotaline pyrrole-induced, platelets and, H1165
vasodilatory therapy effects, models, H1232
renal
hyperresponsiveness of arterial rings and, H272
microvascular perfusion, hypertrophied myocardium, H1384
vascular vasopressin receptors, H693
renovascular, antihypertensive effects of potassium depletion, H1181
spontaneous
ANF-induced vasodepression, CNS, H616
cGMP response to ANF, vascular smooth muscle cells, C573
cold-enhanced pressor response, H1018
reduced sodium-potassium-chloride cotransport, hypertension and, C169

Hypertrophy
cardiac
pressure overload, protein synthesis in, H325
sympathetic activity in, H452
isolation of translation-inhibiting peptide, myocardium, H1024
myocardial, iron deficiency, temperature effects, R90

renal, glomerular effects of diabetes and protein intake, F647

Hyperventilation, acidification, inner medullary collecting duct, F307

Hypervolemia, renal response to, awake state (monkey), R388

Hypocalcemia, parathyroid effects, exchangeable calcium and blood flow, bone, H94

Hypocapnia, hormonal and electrolyte responses to, awake state (sheep), R274

Hypocarbia, acidification adaptation, inner medullary collecting duct, F1155

Hypoglycemia, deep, glucoreceptors and, carotid perfused tissue, E680

Hypokalemia, reentrant and focal arrhythmias, atrium, H1359

Hypoparathyroidism, 1,25-dihydroxyvitamin D synthesis in, E730

Hypoperfusion, pulmonary vaso-regulation after, pentobarbital anesthesia modification of, H569

Hypophysectomy
ANF release in, R534
ornithine decarboxylase activity and, kidney, F270

Hypotension
ACTH and renin, fetal, maternal cortisol effects (sheep), R412
autoregulation of cardiac output, awake state, H44
hemorrhagic, cerebral blood flow and adenosine during, H1211
hormonal response to, mature and immature fetus (lamb), R67
lower-body negative pressure, vagal activity during, R149
serotonergic mechanisms, during hemorrhage, H496
spinal cord blood flow, ^{14}C -butanol measurement of, H953

Hypothalamic cells, SRIF secretion, biphasic stimulation by GHRF, E829

Hypothalamic factor, regulation of sodium pump, renal cells, F574

Hypothalamus
anterior and posteroventral nucleus, noradrenergic turnover in genetic hypertension, H729
circadian variation in response, CRF-41 and AVP, E265
CRF secretion, regulation by glucose, E287
deep hypoglycemia, glucoreceptors in carotid perfused tissue, E680
endogenous sodium-potassium-ATPase inhibitor from, regulation of sodium pump, renal cells, F574
hypercapnia, blood flow during, R295
hyperglycemia, CNS-mediated, E920
lateral, sympathetic firing rate and, R507
lesions
electrolytic and chemical, LH pulses and, E583
lateral, thermogenesis after, E708
paraventricular nucleus, lesion effects on drinking and pressor responses to angiotensin II, R882
ventromedial, adrenoceptor blockade during exercise, R547

Hypothermia
MSH and interleukin interactions and, R914
prolonged, insulin and substrate effects, R1035

SUBJECT INDEX TO VOLUME 255

Hypothyroidism
 ANF during, volume expansion and, R61
 sodium-potassium transport, thyroid hormone effects, E604

Hypovolemia, renin and vasopressin release, ANP inhibition, R368

Hypoxanthine, concentration, hypoxic and stagnant hypoxia (lamb), H53

Hypoxemia
 ANF secretion and, H295
 perioperative, postpneumonectomy lung growth and, E65
 venomotor responses, H760

Hypoxia
 arterial, postnatal intestinal circulation and (swine), H1144
 biogenic amines, pulmonary vascular reactivity to, H329
 carbon monoxide, circulation during β -adrenergic blockade, H77
 central and local, venomotor responses, H760
 hormonal and electrolyte responses to, awake state (sheep), R274
 hypobaric, liver and heart mitochondria, C123
 hypoxic and stagnant, hypoxanthine and lactate concentrations (lamb), H53
 inhibition of protein synthesis during, heart, E537
 left ventricular relaxation, H1468
 phosphoinositide metabolism, aorta, H1476
 reoxygenation and, early left ventricular filling, H1311
 stimulation of proliferation, endothelial cells, H554

Hysteresis
 atrioventricular propagation, H985
 demonstration in refractoriness, ventricular myocardium, H1342

I

Ibuprofen, organ blood flow and, during endotoxic shock (pig), H177

IGF: *see* Insulin-like growth factor

Ileal mucosa, D-glucose transport, sodium-dependent, small intestine, G292

Ileum
 ion transport, leukotrienes in, G175
 lipid infusion, jejunal motor patterns and, G800

Immunoglobulin E
 intestinal anaphylaxis, proximal colon, G201
 motility and anaphylaxis, intestinal, G505

Immunoneutralization, somatostatin and neurotensin, gastric acid secretion and, G40

Impedance
 aortic input, Windkessel model, H742
 characteristic, intramural lymphostasis and vascular mechanics, H1289
 vascular, intramyocardial pressure and coronary flow, model, H664

Indicator dilution technique, insulin uptake, renal cortical epithelium, E357

Indium-111, neutrophil accumulation, myocardial reperfusion injury, H1188

Indo-1, conversion, liver mitochondria, C304

Indomethacin
 ADH action and, bladder (toad), F74

characteristics, papillary collecting duct cells, F1160

ethanol vasoaction and, gastric submucosa, G731

interleukin 1- α -induced fever and, R527

pressor response to serotonin and, lung, H106

pump perfusion, autoregulation and, H280

serotonin responsiveness and, coronary arteries, H1032

Infant: *see also* Neonate; Newborn development, maternal photoperiodic history and (vole), R831

Infarction, myocardial, augmentation of contraction in nonischemic zone, H301

Ingestion: *see* Feeding

Inomycin, agonist-sensitive calcium pool, pancreatic acinar cells, G221, G229

Inositol, survey, renal cell lines, C181

Inositol lipids, turnover, gastric parietal cells, G99

Inositol phosphate
 cell cycle dependence, neuroblastoma cells, C531
 vasopressin stimulation, LLC-PK₁ cells, C502

Inositol phospholipid, hydrolysis, epithelial permeability, C781

Inositol polyphosphates, PTH effects, osteoblast-like cell line, E660

Inositol trisphosphate
 adrenergic stimulation and, ANP release, E260
 agonist-sensitive calcium pool, pancreatic acinar cells, G221, G229
 caerulein effects, pancreatic acini, G33
 cell cycle dependence, neuroblastoma cells, C531
 formation, parotid gland, desensitization by substance P receptors, C149

Inositol 1,4,5-trisphosphate, calcium pool, hydrogen-dependent calcium uptake, parotid gland, G429

Insulin
 action, β -adrenergic mechanisms and, E33
 characteristics, papillary collecting duct cells, F1160
 chloride reabsorption and, loop, F1206
 deoxyglucose pharmacokinetics and, E806
 dependent and independent fetus, glucose kinetics, somatostatin and glucose infusion effects (sheep), E87
 epinephrine, exercise-induced increment, E428
 glucose inhibition of, diazoxide effects, E422
 glucose metabolism stimulated with, carnitine interaction and, E946
 glucose-stimulated secretion, ANF effects, E579
 glucose uptake mediated by, tissue sites, E769
 hepatic fructose 2,6-bisphosphate and, treadmill exercise, R38
 hyperglycemia, autonomic nervous system in, E928
 inhibition of protein synthesis, heart, E537
 intracerebroventricular infusions, dietary obesity model, R974
 metabolism, endotoxin-induced, adrenergic blockade effects, E629

penetration, cerebrospinal fluid, R200

plasma, euglycemic hyperinsulinemia, E942

prolonged stimulation, glycogen storage during, muscle, E621

regional differences, adipocytes, E716

release, furosemide effects, β -cells, E591

renal hemodynamics and, F444

resistance
 acidosis effects, E812
 diabetes mellitus, sialic acid role in, E173
 muscle, obesity and, E374
 responsiveness, protein metabolism, breast, E548

second messenger for, C1

secretion
 cAMP and, pancreatic islets, obesity, E833
 nonadrenergic sympathetic neural influences, E785
 substrate homeostasis and, prolonged hypothermia, R1035

sensitivity
 epinephrine infusion and, E668
 muscle, circadian rhythm and, E41
 muscular glucose metabolism, resting and running, E456

sodium-potassium exchange, glucose metabolism and, E953

soleus axon function and, glucose transport, C60

stimulation of glucose transport, phenylarsine oxide and denervation effects, E159

sympathetic activity, hypothalamic lesions, R507

thyroid status, white adipose tissue development and, E280

transport, intracellular pathways, vascular endothelial cells (calf), C459

triacylglycerol secretion and, liver, E306

uptake, renal cortical epithelium, E357

Insulin-like growth factor, stimulation of glucose transport, phenylarsine oxide and denervation effects, E159

Insulin-like growth factor I
 distinct receptors for, renal glomeruli and tubules, E504

gene expression, muscle, E513

stimulation of sodium transport, renal (toad), C413

Insulinlike growth factor I, synthesis and release, mesangial cells, F1214

Insulin-like growth factor II, calcium-permeable cation channel, BALB/c 3T3 cells, C442

Interleukin, physiological changes, during urethan anesthesia, R73

Interleukin 1
 interactions with MSH, effects on sleep, behavior, and brain temperature, R914

tumor necrosis factor and, energy metabolism, E760

Interleukin 1- α , febrile response to, indomethacin effects, R527

Interlobular artery, carbon dioxide partial pressure, variations, renal cortex, F361

Intestinal hormones, inositol lipid turnover and, gastric parietal cells, G99

Intestinal mucosa, intramural distribution, blood flow, during sympathetic stimulation, H1091

SUBJECT INDEX TO VOLUME 255

Intestine
 absorption
 arachidonic and linoleic acid, G612
 fatty acid, analysis of sequential events, G361
 amino acid transporters and peptidases, regulatory signals for, G151
 anaphylaxis, distal colon, G201
 L-aspartate transport, low-affinity, C737
 brush-border membrane, sodium-dependent L-proline transport (eel), R648
 brush-border membrane vesicles, guanine transport, G85
 carnosine transport, dietary regulation of, G143
 chloride absorption, pH effects (flounder), G247
 circulation: see Circulation
 decreased secretion, aging and, G72
 ion transport, leukotrienes in, G175
 lipid absorption, microvascular exchange during, G690
 motility: see Motility
 myoelectric activity
 intraluminal nutrient effects, G12
 ketocyclazocine and, G566
 necrotizing enterocolitis, inflammatory mediators and, G556
 postgastric controls, feeding behavior, preweanlings, R191
 satiety, capsaicin treatment and, R569
 sodium-hydrogen and chloride-bicarbonate exchange, norepinephrine effects, G18
 sodium-cation-chloride cotransport, bumetanide effects (flounder), C246
 succinate transport, sodium effects, C95
 sugar transport, sodium-coupled (chicken), C486
 transcellular calcium transport, glucose enhancement of, G339
Intestine, small
 basolateral membrane vesicles, calcium transport by, G482
 growth, neurotensin stimulation of, G813
 protein digestion, neutral endopeptidases in, G212
 proximal resection, sodium-dependent transport of d-glucose, G292
 secretion release, G7
 Inulin, microinjection, acute renal failure, F257
Iodine-131, circadian period and (hamster), R1
 Iodipamide, biliary secretion, lipid particles and, G745
Ions
 absorption, sugar-stimulated, vertebrates and invertebrates, R583
 concentration, subcutaneous interstitial fluid, F513
 Ionomycin, cytosolic free calcium regulation, proximal tubules, F787
Iron
 deficiency, norepinephrine in, environmental temperature effects, R90
 nephrotoxicity and, F539
 transport, erythron, R326
Ischemia
 cerebral, superoxide generation after, newborn, H401
 coronary, augmentation of contraction in nonischemic zone, H301
 glucose 1,6-bisphosphate during, skeletal muscle, C140

myocardial
 afferent autonomic reflexes and, H26
 cellular compartmentation in, H929
 electrical and mechanical arrest effects, H60
 neutrophil accumulation and, H1060, H1188
 regional dysfunction after, H85
 sarcolemma in, freeze-fracture study, H467
 selective cardiac denervation and, awake state, H525
 subcellular electrolyte shifts during, H917
 thromboxane antagonism effects, H318
renal
 course and pathogenesis, F257
 failure, oxidant injury in, F450
 injury, altered glutathione content and, F911
 reperfusion and
 cerebral artery response, H879
 depolarization-induced automaticity, H992
 reperfusion injury, kidney, neutrophils and, F728
 Islets of Langerhans
 diazoxide effects, glucose inhibition of insulin, E422
 glucose-stimulated insulin secretion, ANF effects, E579
 Isochrones, pressure-thickness, left ventricular systolic wall, H1136
 Isoflurane, VIP effects and, vascular conductance, R968
 Isoform, sodium-potassium-ATPase, high-ouabain-affinity by thyroid hormone, E912
 Isonicotinamide, somatostatin release and, D-cells, G424
 Isoproterenol
 adrenergic stimulation and, ANP release, E260
 arterial hypoxia and, effects on postnatal intestinal circulation (swine), H1144
 calcium-activated potassium channels and, aortic smooth muscle cells, H754
 dexamethasone effects, A6 epithelia, C661
 heart rate control, diabetes, E636
 inhibition of ANP secretion, H1429
 inhibition of protein synthesis, heart, E537
 inotropic response to, early sepsis, H699
 maturation of responses, fetus (lamb), R794
 ontogeny of anorexia, R908
 VIP receptors and, desensitization, heart, H601
 Isotopes, infusion, glucose kinetics and, euglycemic clamp, E871

J

Jejunum
 absorption of fatty acid, G361
 secretion, catecholamine-stimulated, α_2 receptors and, G640
 brush-border membrane vesicles, sodium and hydrogen transport, G206
 contraction, antigen-induced, G701
 hyperemia, food-induced, adenosine effects, G168

motor patterns, ileal lipid infusion effects, G800
Junction
 gap
 cell uncoupling and protein kinase C, C699
 electrical coupling, colonic smooth muscle, C653
 lower esophageal sphincter, G441
 oncogene expression and, C674
 properties, heart cells, neonate, H770
Juxtaglomerular apparatus
 renin secretion, osmotic forces and, F1
 tubuloglomerular feedback responses, adenosine analogue effects, F33

K

Kainate, parabrachial stimulation, pressor response and, H1349
 Kainic acid, pressor responses, dorsal or ventrolateral medulla, R709
Kaliuresis
 low-dose ANP infusion and, anesthesia, R449
 vasopressin effects, E449
Kallikrein
 abnormal vascular reactivity induced by, H397
 angiotensin II and, papillary blood flow, F690
 Ketamine, VIP effects and, vascular conductance, R968
 Ketanserin, pump perfusion, autoregulation and, H280
 Keto acids, metabolism, regulation in kidney mitochondria, E475
 Ketocyclazocine, control of myoelectric activity and, intestine, G566
 Ketogenesis, flow rate and insulin effects, liver, E306
 α -Ketoglutaric acid, *p*-aminohippurate transport and, renal basolateral membrane vesicles, F597
 α -Ketoisocaproate, metabolism, regulation in kidney mitochondria, E475
 Ketone bodies
 plasma, satiating effects of fat, diabetes, R123
 transport, brain cells, C133
Kidney
 ablation
 ANP-mediated solute excretion, F1091
 nephrosis, single-nephron protein excretion after, F1243
 activity of ANP, cGMP as biological marker of, F1220
 adaptation
 to metabolic acidosis, senescence and, F1183
 to phosphate deprivation, pituitary involvement in, R373
 allometry (lizard), R760
 ammonogenesis, purine nucleotide cycle effects, F1122
 ANF
 effects, dopamine receptors and, F494
 metabolism, F466
 basolateral membrane vesicles, *p*-aminohippurate transport by, F597
 brush-border membrane, enzymatic and transport characteristics (snake), R52
 brush-border membrane vesicles, dipeptide transport, C822

SUBJECT INDEX TO VOLUME 255

Kidney (*continued*)
 calcium transport, calcium-binding protein role in, F558
 collecting duct
 adaptation to sodium delivery, F1256, F1269
 chloride transport, F220
 cortical and medullary thick ascending limbs, immunodissection of, F704
 cortical collecting duct, paracellular pathway in, F720
 cortical endosomes, chloride-dependent, ATP-driven hydrogen transport, F885
 distal tubules, passive properties (amphibian), F158
 dopamine receptors, identified by ^{125}I -Sch 23982, F970
 dose response and pharmacokinetics, ANF, R929
 epithelial membrane, sodium-sugar co-transport system, C745
 failure
 glycerol-induced, hydroxyl radical role in, F438
 hemoglobin- and myoglobin-induced, F539
 postischemic acute, F257
 postischemic acute, oxidant injury and, F450
 function
 angiotensin II modulation of ANP effects, F545
 ANH hormone effects, sodium depletion, R867
 ANP release and, vasopressin effects, E449
 developmental changes for phosphate reabsorption, F278
 fetus, maternal hyperglycemia effects (sheep), F11
 intrarenal renin inhibition and, F749
 physiological dose of ANP and, F907
 glomerular filtration rate and proteinuria, feeding and aging effects, awake state, F250
 hemodynamics
 amino acid and hormone level effects, F444
 kinin analogue antagonist, F408
 kinins and angiotensin II influence, F690
 NE-ACTH hypertension and, R894
 vascular reactivity and, DOCA-salt hypertension, R563
 hepatic clearance of renin, glycosylation for, E642
 interstitium, pressure natriuresis during hypertension, R756
 ischemia-reperfusion injury, neutrophil accentuation of, F728
 ischemic injury, altered glutathione content and, F911
 liver interrelations, acid-base balance, F807
 metabolic clearance, ANP, E934
 metabolism, alanine importance in, R42
 micropuncture
 amino acid transport, F397
 tubuloglomerular feedback during, F383
 mitochondria, valine and α -ketoisocaproate metabolism, E475
 norepinephrine turnover, genetic hypertension, H736

ornithine decarboxylase activity, compensatory growth and, F270
 phosphate metabolites, NMR studies of, F581
 phosphate transport, humor hypercalcemia of malignancy and, F1078
 plasma membrane, time course of thermal adaptation (trout), R622, R628
 potassium-depleted, protease effects on adenylate cyclase, F1033
 potassium regulation, aldosterone role in, F811
 preglomerular vessels, angiotensin II receptors, E16
 prehypertensive plasma, hyperresponsiveness of arterial rings and, H272
 pressure-dependent natriuresis, low concentrations of ANP and, F391
 renin granules, Triton WR-1339 in, E353
 renin secretion, osmotic forces; and, F1 response
 ANF secretion and, F936
 amino acid infusion, captopril effects, diabetic adults, F755
 intravenous-endothelin, awake state, R1064
 low-dose ANP infusion, anesthesia, R449
 stress, borderline hypertension, R431
 vasopressin, tonic inhibition by pertussis toxin substrate, F1107
 volume expansion, awake state (monkey), R388
 sodium-hydrogen antiporter activity and, acidemia effects, F237
 sodium transport, stimulation by IGF1 (toad), C413
 thick ascending limb, active ammonium absorption, F57, F78
 thick limbs of Henle, diluting power, F1128, F1138, F1145
 tubuloglomerular feedback responses, adenosine analogue effects, F33
 Kidney cells
 collecting, fluorescent characterization of, F1003
 cortical collecting tubule, adenosine and intracellular calcium, C581
 epithelial
 growth, novel cytosolic protein kinetics during, F868
 lithium inhibition of adenylate cyclase, F995
 PDGF-like protein secretion (monkey), F800
 permeability, oxidants and, C781
 glomerular mesangial
 AVP-induced calcium fluxes, F142
 uracil RNA metabolism, C712
 inner medullary collecting duct
 ANP receptors in, F324
 sodium-hydrogen exchange activity, F331
 LLC-PK₁ clones, trehalase expression after glucose starvation (pig), C816
 papillary collecting duct, characteristics in culture, F1160
 papillary epithelial, crystal binding, F1025
 regulatory volume increase, sodium-hydrogen exchange and, separate control (opossum), C76
 sodium-inorganic phosphate cotransport, modulation by extracellular phosphate, C155

sodium-lactate cotransport, apical membranes, F1249
 sodium pump, regulation by hypothalamic factor, F574
 survey of osmolytes in, C181
 tubular, epidermal growth factor and, F1191
 volume regulation, without active transport, F529
 Kidney cortex
 carbon dioxide partial pressure, analysis of variations, F349, F361
 collecting duct, ADH and membranes (toad), F375
 epithelium, insulin uptake, E357
 renin secretory mechanisms, two pathways, F100
 thick ascending limbs, immunodissection of, F704
 Kidney glomerulus
 allometry (lizard), R760
 ANF metabolism in, F466
 ANF receptors, during rehydration, F621
 disease, transmembrane signaling and leukotriene receptors, C771
 growth factors, mesangial cells, F674
 insulin-like growth factor I, distinct receptors for, E504
 mesangial cells, pH regulation, C844, C857
 permselectivity, serum proteins (trout), R418
 phospholipase C activation in, prostaglandins and thromboxane A₂, F1059
 renin secretion, osmotic forces; and, F1 uracil nucleotide synthesis, F635
 diabetes and protein effects, F647
 uracil ribonucleotide metabolism, cells, C712
 Kidney medulla
 ammonia recycling, potassium effects, F78
 blood flow: *see* Blood flow
 collecting duct
 hormone effects on sodium chloride permeability, F421
 immunocytochemical localization of band 3 protein, F115
 dehydration, accumulation of major organic osmolytes in, F626
 inner collecting duct
 acidification adaptation along, F1155
 apical membrane, cation channel, F278
 suppression of acidification, F307
 kinin and angiotensin II effects, papillary blood flow, F690
 loop of Henle, structure (bird), F500
 sodium influx, bumetanide-sensitive, F1138
 solute concentration, ureteral excision effects, F1225
 thick ascending limb
 benzodiazepine effects, C385
 hypotonic cell volume regulation, F962
 thick ascending limbs, immunodissection of, F704
 Kidney papilla
 amino acid transport, juxtamedullary nephrons, F397
 collecting duct, atrial natriuretic peptide action in, F313
 collecting duct cells, characteristics in culture, F1160

collecting tubule, calcium oxalate adherence to cells, F1025
 inner medullary collecting duct, sodium chloride permeability, hormone effects, F421
 purified epithelial sodium channel, antibodies against, C835
 Kidney pelvis, urea flux, F244
 Kidney tubules
 atrial natriuretic peptide action in, F313
 backleak, acute renal failure, F257
 capacity, developmental changes for phosphate reabsorption, F287
 cells, epidermal growth factor and, F1191
 cortical collecting
 adenosine and intracellular calcium, C581
 AVP-dependent cAMP levels, PGE₂ and α -adrenergic agonist effects, F43
 chloride transport, F220
 dopamine inhibition of sodium-potassium-ATPase activity, F666
 fluorescent vasopressin analogue and, C622
 hydraulic conductivity, cGMP effects, F841
 paracellular pathway characteristics, F720
 potassium transport, increased peritubular potassium effects, F108
 protease effects on adenylate cyclase, F1033
 regulatory cell volume decrease, C612
 respiratory acidosis effects on bicarbonate transport, F656
 response to vasopressin, pertussis toxin substrate effects, F1107
 sodium-potassium-ATPase-dependent sodium flux, F605
 distal
 adaptation to sodium delivery, F1256, F1269
 passive properties (amphibian), F158
 whole-cell potassium current (frog), F699
 everted, apical membrane function (salamander), F1276
 innervation, limb of Henle, F340
 insulin-like growth factor I, distinct receptors for, E504
 medullary, ADH effects, cAMP-binding protein, F292
 medullary collecting, cAMP production, calmodulin dependence of, F834
 phosphatase action, foscarnet, F984
 proximal
 ammoniogenesis, PTH effects, F847
 ammoniogenesis, purine nucleotide cycle effects, F1122
 ammonia loss from, F861
 cytosolic free calcium, bradykinin effects, F486
 differentiation of sodium-potassium pump, F552
 exogenous oxidant injury, glutathione protection, F874
 intrarenal volume expansion, sodium reabsorption effects, F1178
 necrosis, microsomal protein synthesis inhibition, F265
 organic cation transport, potential driven (flounder), R492
 oxygen consumption, benzodiazepine effects, C385

regulation of cytosolic free calcium, F787
 respiration, membrane potential, and potassium, succinate effects, F1170
 routes of water flow (salamander), F188
 sodium-chloride absorption, sodium-hydrogen antiport role in, F461
 t-butyl hydroperoxide-induced toxicity, C28
 volume regulation without active transport, F529
 proximal convoluted
 ANF metabolism in, F466
 citrate reabsorption, pH effects, F301
 protein metabolism, F520
 proximal straight
 active dipeptide transport in, F177
 anions in hypotonic volume regulation, F853
 intracellular chloride activity, F49
 phosphate deprivation, cAMP analogue infusion effects, F96
 TEA transport, choline effects (snake), F167
 Kinin analogue antagonist, renal hemodynamics and, F408
 Kinins
 abnormal vascular reactivity induced by, H397
 angiotensin II and, regulation of papillary blood flow, F690
 thyroidectomy and, E411
L
 L364,718, action, gastric emptying and, G685
 Lacrimal gland, chloride-bicarbonate antiport, G367
 Lactate
 after isometric contraction, skeletal muscle, C145
 brain and CSF composition, long-term anoxia effects, diving (turtle), R338
 concentration, hypoxic and stagnant hypoxia (lamb), H53
 epinephrine, exercise-induced increment, E428
 exercise at reduced blood flow, limb muscle, H1156
 ontogeny of anoxia, R908
 precursors, fetus (sheep), E743
 production, from glucose, adipocytes, E716
 exercise at reduced blood flow, limb muscle, H1156
 ontogeny of anoxia, R908
 precursors, fetus (sheep), E743
 production, from glucose, adipocytes, E716
 specificity, cellular ATP and, nephron, F977
 Lactation: *see also* Fetus; Placenta; Pregnancy
 pregnancy and, effects on sodium appetite, R1020
 Laminin, cultured heart cells, attachment and maintenance, C19
 Laminitis, epidermal growth factor, vascular smooth muscle cells (horse), C447
 Length-tension relations, regional differences, colon, G787
 Lens epithelium, sodium-hydrogen exchange activity, cellular pH and (toad), C595
 Leucine
 extraction effects, protein kinetics, R303
 kinetics, time course of cortisol action, E366
 metabolism, insulin responsiveness of, bedrest, E548
 Leukocytes, polymorphonuclear, myocardial reperfusion injury, H1188
 Leukotrienes
 ethanol vasoaction and, gastric submucosa, G731
 sulfidopeptide, ileal ion transport and, G175
 Leukotriene C₄
 electromechanical activity and calcium uptake with, *taenia coli* (guinea pig), C433
 synergistic effects, coronary flow and myocardial function, H153
 Leukotriene D₄, receptors: *see* Receptors LH: *see* Luteinizing hormone Lidocaine, sodium and, recovery kinetics (frog), H1558
 Light-dark cycle, non-REM sleep, EEG analysis, R27
 Linear regression, multiple, vs. traditional analyses of variance, R353
 Linoleic acid, orally fed, absorption and metabolism, G612
 Lipase, inactivation, proteases and, G476
 Lipids
 absorption, microvascular exchange during, intestinal, G690
 biosynthesis, prolactin effects, mammary gland explants, E567
 composition, hormone effects, testes, E442
 ileal infusion, jejunal motor patterns and, G800
 metabolic control of feeding, R82
 metabolism
 liver microsomes (trout), R923
 thyroid hormones and, E146
 particles, biliary secretion of organic anions and, G745
 peroxidation
 exercise intensity and, skeletal muscle, C874
 glutathione protection, renal proximal tubules, F874
 glycerol-induced renal failure, F438
 postischemic acute renal failure, F450
 renal proximal tubules, C28
 plasma, regulation of transfer by high-density lipoproteins, E894
 plasma membrane, order in MDCK cells, F22
 pyloric motility and, G490
 Lipogenesis
 flow rate and insulin effects, liver, E306
 insulin-sensitive, diabetes mellitus, E173
 Lipolysis studies, adipose tissue, microdialysis in, E737
 Lipophilic anions, glutathione efflux and, hepatocytes, G403
 Lipoprotein
 amniotic fluid, cholesterol metabolism, aorta, fetus, H160
 high-density
 plasma lipid transfer and, E894
 orally fed, absorption and metabolism, G612
 secretion, hepatic, perfusion rate and, E306
 very-low-density, triglyceride kinetics, carbohydrate feeding and, E236
 Lipoprotein lipase
 endothelial, heart metabolic fate, E247
 high-fat diet and exercise effects, white and brown adipose tissue, R226

SUBJECT INDEX TO VOLUME 255

Lipoprotein lipase (*continued*)
 melatonin and, adults (hamster), R812, R823
 Lipoxygenase inhibitors, oxygen responses and, cheek pouch arterioles (hamster), H711
 Lithium
 inhibition, adenylate cyclase, renal epithelial cells, F995
 transport, papillary collecting duct cells, F331
 Liver
 amino acid transport, inactivation by PCMBS, C340
 biliary protoporphyrin excretion, bile acid hydroxylation effects, G382
 biosynthetic capacity (hummingbird), R699
 cells: *see* Hepatocytes
 cholesterol metabolism, acetyl-CoA hydrolase activity relations, R724
 clearance of renal renin, glycosylation for, E642
 cotransport, taurocholate and bilirubin glucuronides, G121
¹⁴C-sucrose-insulin uptake, intracellular fate of, C70
 DIDS excretion, bicarbonate effects, G713
 epidermal growth factor, ontogenesis of, E28
 glucose intolerance, thyrotoxicosis, E843
 glutathione efflux by, membrane potential difference in, G547
 glycogen, sensitivity to insulin, circadian rhythm and, muscle, E41
 kidney interrelations, acid-base balance, F807
 lipid peroxidation, metallothionein response to stress, E518
 membrane potential, sex differences, G822
 metabolism, DHEA effects, obesity, E1
 microsomes, acylation of lysophosphatidylcholine (trout), R923
 mirex-induced adaptive growth, hepatocytes and, G132
 mitochondria
 chronic hypobaric hypoxia, C123
 conversion of fura-2 and indo-1, C304
 ontogeny of anoxia, R908
 perfused, thyroxine uptake, E110
 plasma membrane vesicles, sodium-glycine cotransport, G253
 portal vein infusion, physiological enteric stimulation, G319
 protein kinetics, splanchnic leucine extraction effects, R303
 sampling, new method of portal vein cannulation, G191
 sodium-hydrogen exchanger in, G346
 SV40-transformed hepatocytes, growth-dependent regulation of system A in, C261
 thyroid hormone kinetics, D-propranolol treatment and, E80
 triacylglycerol secretion, flow rate and insulin effects on, E306
 uptake index, obesity and, E54
 LLC-PK, cells
 activity of ANF, cGMP as biological marker of, F1220
 clones, trehalase expression after glucose starvation (pig), C816
 epidermal growth factor and, F1191

phosphoinositide hydrolysis, vasopressin stimulation of, C502
 sodium-hydrogen antiport, mutant, C495
 sodium-lactate cotransport, apical membranes, F1249
 sodium-sugar cotransport system, polarization marker, C745
 Loading, sodium, gene expression and, ANF, H245
 Locomotion, sprint running, muscle composition and (lizard), R470
 LTC₄: *see* Leukotriene C₄
 Lumbar nerve, unequal bulbospinal influences on, R946
 Lung
 chronic disease, cathepsin G and type II pneumocytes, C603
 compensatory growth, collagen synthesis changes during, C754
 cyclooxygenase-inhibited, serotonin and, H1096
 inflation reflex, coronary circulation and, H866
 modulation of cyclase activity, glucocorticoids, E153
 muscarinic regulation, pulmonary intravascular volume and, H1219
 perfusion effects, fluid filtration (lamb), H1336
 postpneumonectomy growth, perioperative hypoxemia effects, E65
 squamous cell carcinoma, synthetic tumor PTH-related peptide effects, F957
 upper airways, pulmonary and systemic blood flow contributions, H1130
 vascular disease
 endothelial injury and, H1484
 intralipid effects, H1499
 vascular reactivity, biogenic amines in acute hypoxia, H329
 Luteinizing hormone
 GnRH and secretagogue-induced release, calmodulin antagonist effects (calf), E59
 GnRH sensitivity, underfeeding and, prepubertal females, E482
 pulsatile secretion, computer simulation, E775
 pulses, electrolytic and chemical hypothalamic lesion effects, E583
 release, hypothalamic GnRH sequence, menstrual cycle, E696
 response to arachidonic acid and protein kinase C, gonadal steroid effects on, E314
 Luteinizing hormone-releasing factor, gonadal suppression, growth during, E559
 Lymph
 fistulas, pulmonary vascular response to PAF, awake state (sheep), H434
 flow
 lung, during increased blood flow, H1149
 lung, perfusion effects (lamb), H1336
 pulmonary embolism, H1075
 pulmonary and peripheral, protein clearance after surgery (sheep), H1421
 Lymphatics
 constriction, catecholamines, carotid occlusion, or hemorrhage, H514
 venous pressure, pleural effusions and (sheep), H492
 Lymph duct, right albumin reabsorption kinetics, H375

Lymphokines, corticosterone-releasing effects, R839
 Lymphostasis, intramural, vascular mechanics and, H1289
 Lymph vessels, prenodal, constriction of lymphatics, H514
 Lysophosphatidylcholine, acylation in microsomes, theramly acclimated liver (trout), R923
 Lysosomes
 intracellular fate, liver, C70
 metabolism, kidney tubules, F520

M

Macromolecules, bone, age-related changes in calcium binding capacity, H101
 Macula densa, renin secretion, osmotic forces and, F1
 Magnesium
 activation, smooth muscle, *taenia coli* (guinea pig), C465
 brain and CSF composition, long-term anoxia effects, diving (turtle), R338
 cytoplasmic, concentration, platelets, H855
 subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
 Malic enzyme, DHEA treatment and, obesity, E1
 Malonaldehyde
 content, exercise effects, skeletal muscle, C874
 oxidant injury, postschemic acute renal failure and, F450
 Mammary gland, lipid biosynthesis, prolactin effects, E567
 Mannose, pancreatic islet discrimination of, computer simulation, E189
 Manometry, contractile activity, colon, G660
 Maternal-fetal interaction, prenatal melatonin injections, entrainment of circadian rhythms in pup (hamster), R439
 Maturation: *see also* Development; Growth
 β -adrenoceptor-mediated responses, fetus (lamb), R794
 GnRH sensitivity, underfeeding and, prepubertal females, E482
 heart, metabolic hyperemia and (guinea pig), H1460
 postnatal, inotropic responses during, H335
 skeletal, sex steroids impact on, E559
 MDA: *see* Malonaldehyde
 MDCK cells
 apical membrane, ammonia permeation via lipid pathway, F135
 epidermal growth factor and, F1191
 lipid order in, F22
 Meals: *see* Feeding
 Meclofenamate
 pressor response to serotonin and, lung, H1096
 serotonin responsiveness and, coronary arteries, H1032
 Median preoptic nucleus, neurons, inhibition by subfornical organ and anteroventral third ventricle, R961
 Medulla oblongata, ventrolateral, angiotensin receptors, H1011
 Meiosis, oocyte, GnRH effects (goldfish), R268
 Melanocyte-stimulating hormone, interactions with interleukin 1, effects on

SUBJECT INDEX TO VOLUME 255

sleep, behavior, and brain temperature, R914

Melatonin
2-deoxy-[1-¹⁴C]glucose uptake and, suprachiasmatic nucleus, R332
entrainment, female activity rhythms, R237
long-day responses and short-day housed, adult (hamster), R823
prenatal injections to mother, entrainment of circadian rhythms in pup (hamster), R439
reproductive quiescence induced by, exercise inhibition (hamster), R718
short-day responses and, adults (hamster), R812

Membrane
apical
ADH effects, urinary bladder (toad), F375
cation channel, inner medullary collecting duct, F278
cytochalasin B effects, bladder (toad), C526
enzymatic and transport characteristics (snake), R52
function, everted renal tubule and (salamander), F1276
MDCK cells, ammonia permeation via lipid pathway, F135
potassium conductance, gallbladder epithelial cells (guinea pig), C808
basolateral
renal, hypertaurinuria and, F88
renal vesicles, *p*-aminohippurate transport by, F597
vesicles, small intestine, calcium transport, G298

luminal
histidine effects on vasopressin action, bladder (toad), F685
renal cortical epithelium, E357
renal tubules, TEA transport by (snake), F167

plasma
calcium pump, transport capacity (toad, pig), C226
chloride pump, R677
kidney, thermal adaptation (trout), R622, R628
placental, chloride transport, fluorescence measurement, C789
secretory granule, potassium transport, pancreas and parotid gland, C705

Mendelian inheritance, inborn errors, physiological processes revealed through, F1047

Menstrual cycle, alterations, hypothalamic GnRH sequence, E696

6-Mercaptopurine, ammoniogenesis, intrarenphron, F1122

Mesangial cells
glomerular
growth, vasopressin effects, F898
vasopressin-induced calcium mobilization, F771
insulinlike growth factor I synthesis, F1214
phospholipase C activation in, prostaglandins and thromboxane A₂, F1059
transmembrane signaling, leukotriene receptors, C771

Mesenteric artery
nitric oxide, electrical and mechanical properties, H207

solcolemmal membrane vesicles, sodium-calcium exchange, C323

Mesenteric vein, excitatory cholinergic innervation, H288

Mesentery
autoregulation in, elevated ambient oxygen effects, H131
blood flow: *see* Blood flow

Mesonephros, renal allometry (lizard), R760

Metabolic activity, activation of paratrigeminal nucleus, entrance to hibernation (squirrel), R178

Metabolic control, food intake, after 2-deoxy-D-glucose and nicotinic acid injection, R82

Metabolic rate, growth and obesity, acceleration by group housing, R128

Metabolic responses, recombinant human tumor necrosis factor, E206

Metabolic scaling, theory of similitude, R350

Metabolites, concentrations, individual muscle fibers, stimulation and, C543

Metanephros, renal allometry (lizard), R760

Methacholine, inhibition of ANP secretion, H1429

Methazolamide, sodium-chloride absorption and, proximal tubule, F461

Methionine, metabolism, quantitative study, E322

Methionine-enkephalin
gradient in muscle cells, biliary tract, G647
release, blood and CSF, hemorrhage effects, R731

Methoxamine
adrenergic stimulation and, ANP release, E260
catecholamine-stimulated acid secretion and, jejunum, G640

Methoxyverapamil, vasoconstriction, renal, H885

N-Methyl-DL-aspartate, LH pulses, arcuate nucleus and, E583

Methylene blue
bioassay of endothelium-derived relaxing factor, H1259
cGMP and, renin release, F474
internal anal sphincter relaxation, G571

3-O-Methylglucose, transport, stimulation, growth hormone, E723

Methysergide, renal sympathoinhibition, during severe hemorrhage, H496

Metiamide, adrenergic-histaminergic interactions, neural, hindpaw, H426

Microaggregates, blood flow distribution determined by, intrarenal, H1535

Microcatheterization, acidification, inner medullary collecting duct, F307, F1155

Microcirculation: *see also* Blood flow; Microcirculation
α-adrenoceptors, temperature effects, H121
cerebral
bioassay of endothelium-derived relaxing factor, H1259
blockade from acetylcholine and nitric oxide, H847
kinins and vascular reactivity, H397
cutaneous, control during perfusion pressure, wing (bat), H1114
elevated ambient oxygen and, mesentery, H131

gastric mucosa, ethanol vasoaction, arachidonic acid effects, G731
lipid absorption and, intestinal, G690
local vascular resistance and, effective diameter, H1240
medullary, ureteral excision effects on solute concentration, F1225
oxygen response, arterioles, lipoxygenase inhibition of (hamster), H711
red cell velocity, functional hyperemia (hamster), H236

Microdialysis
adipose tissue, lipolysis studies, E737
glucose intercellular levels, subcutaneous tissues, E218

Microneurography, reflex activation of sympathetic nervous system, ANF effects, H685

Microperoxosomes, properties and subcellular localization, myocardial, H441

Microscopy
electron
endolymph secretion, semicircular canal (shark), F711
immundissection of thick ascending limbs, kidney, F704

fluorescence
oncogene expression and junctional permeability, C674
vasopressin analogue, collecting duct cells, C622

video, Nomarski and fluorescence imaging during, C566

Microsomes, liver, acylation of lysophosphatidylcholine (trout), R923

Microspheres
fluorescent, angiotensin II probe, C452
radiolabeled
blood flow and secretion of salt glands, VIP effects (duck), R575
intrarenal blood flow distribution, H1535
naloxone and circulatory changes in endotoxin shock, awake state, H1106
upper airway blood flow, H1130
vascularized skeletal muscle grafts, blood flow in, H1043

Microtubular network, antidiuretic response and (frog), F1098

Microvascular cell, injury, allopurinol and, H202

Mineral, absorption, transcellular, glucose enhancement of, intestine, G339

Mineralocorticoids
aldosterone-vasopressin interactions, central, R166
potassium regulation, aldosterone role in, F811
sodium chloride permeability and, inner medullary collecting duct, F421

Mitochondria, liver and heart, chronic hypobaric hypoxia, C123

Models
blood flow distribution, intrarenal, H1535
carbon dioxide partial pressure, variations, renal cortex, F349, F361
compartmental, tracer methodology, E94
electrical analog, coronary veins, H834
ellipsoid, linear transformation and, ventricular ejection fractions of, H197
end-systolic pressure-volume, pressure-wall thickness relations, H679
gastric ulceration, G395

Models (continued)
 general biophysical, episodic endocrine gland signaling, E749
 intramycocardial pressure, coronary flow and, H664
 mathematical, atrioventricular nodal transmission, H1247
 3-OHB and insulin effects, dietary obesity, R974
 reflex summation, H1244
 regulation of shortening velocity, cross-bridge cycling, smooth muscle, C86
 theoretical, insulin effects on deoxyglucose metabolism, E806
 thyroxine uptake, perfused liver, E110
 vasodilatory therapy effects, pulmonary hypertension, H1232
 Windkessel, aortic input impedance, H742

Monensin, cell death in hepatocytes, extracellular acidosis effects, C315

Monocarboxylic acid, transport, apical membranes, F1249

Monoclonal antibodies
 against sodium channel protein, renal papilla, C835
 anti-receptor, kidney cytosol, E293

Monocrotaline pyrrole, pulmonary hypertension caused by, thrombocytopenia effects, H1165

Monohydroxyeicosatetraenoic acid, histamine stimulation of, endothelial cells, C214

Motility
 colonic, regional differences, G787
 gallbladder, G409
 gastric
 CCK effects, G55
 cholecystokinin effects, G242
 gastroduodenal, denervation effects (turkey), G1
 gastrointestinal
 ketocyclazocine and, G566
 membrane potential effects, proximal colon, C828
 intestinal
 anaphylaxis and, G505
 CCK regulation of, G498
 pyloric
 opioid receptors in, G352
 topography and measurement, G490
 small intestinal, lipid infusion after meals and, G800
 villous, neurohumoral control, G162

Motoneurons, axonal protein transport, exercise training and, C731

Motor activity, cyclic, gallbladder, G409

Motor complex, migrating, gallbladder, G409

Motor units, soleus, electromechanical and metabolic properties, C684

MSH: *see* Melanocyte-stimulating hormone

Muramyl dipeptide, sleep and fever induced by, R157

Muscle
 antral, neurokinin effects, G779
 chronic stimulation, metabolite concentration of fibers, C543
 circular, plexus neurons, [³H]saxitoxin binding, G462
 composition, sprint running and (lizard), R470
 fast-twitch, external anal sphincter, G772
 forearm, pH and lactic acid output, exercise, F479
 glucose metabolism, physical inactivity and, E456
 glycogen storage, prolonged insulin stimulation and, E621
 insulin resistance, obesity, E374
 insulin sensitivity, circadian rhythm and, E41
 metabolic changes, track sprint running (greyhound), R513
 papillary: *see* Muscle, heart
 regenerating, hemin effects on aerobic capacity, C519
 skin and, albumin flux and volume flow in, H458
 subcellular enzyme, glycolytic control (fish), R289

Muscle, heart
 cells, carbon monoxide effects, C291
 contractile force, single cells vs. ventricular muscle strips (frog), H111
 function, during stress, E518
 inotropic response, changes during postnatal maturation, H335
 myosin heavy chains, separation, H659
 positive force-frequency staircase, intracellular sodium role in (guinea pig), C798
 subcellular enzyme, glycolytic control (fish), R289
 tension, superoxide anion and, H138

Muscle, skeletal
 after isometric contraction, glucose 1,6-bisphosphate, C145
 circulatory occlusion, glucose 1,6-bisphosphate during, C140
 denervated, adrenalectomy and diet effects, E850
 energy metabolism, cimaterol effects, R952
 exercise intensity, MDA content and, C874
 fiber types, adenine nucleotide synthesis in, C271
 glucose
 euglycemic hyperinsulinemia, E942
 non-insulin- and insulin-mediated uptake, E769
 glutamine synthetase expression, dexamethasone effects, E397
 hormone stimulated glucose transport, phenylarsine oxide and denervation effects, E159
 hypertrophy, growth hormone-stimulated, IGF-I and -II gene expression, E513
 ischemic, intracellular sodium flux and high-energy phosphorus metabolites in, C377
 limb, exercise, substrate exchange during, H1156
 myosin heavy chains, separation, H659
 norepinephrine turnover, genetic hypertension, H736
 oxygen consumption, heating contralateral hand and, E572
 protein kinetics, splanchnic leucine extraction effects, R303
 protein synthesis, glutamine concentration relations, E166
 sarcoplasmic reticulum, fura-2 monitoring of calcium uptake, C694
 sodium-potassium-ATPase isoforms, thyroid hormone, E912
 sodium-potassium transport, thyroid hormone effects, E604
 sympathetic nervous system responses, diet and cold exposure, E180
 thermogenic agent effects, insulin receptors, obesity, E101
 vascularized grafts, blood flow in, H1043

Muscle, smooth
 anal sphincter
 purinoceptors in (opossum), G389
 relaxation, G571
 arterial, nitric oxide, H207
 calcium pumps, superoxide radical effects, C297
 colonic, electrical coupling and pacemaker activity, C653
 contraction, length dependence (swine), C473
 contraction and relaxation, myosin phosphorylation and, C34
 cross-bridge phosphorylation
 regulation of shortening velocity, model, C86
 strontium effects (pig), C401
 esophageal, response to distension (opossum), G587
 ethanol vasoaction in, arachidonic acid metabolite effects, G731
 gallbladder, CCK receptor, labeling using probes, G579
 heat production, during isometric contraction, C536
 intestinal, leukotriene C₄ effects, electro-mechanical activity and calcium uptake (guinea pig), C433
 jejunal, antigen-induced contraction, G701
 microvascular, local tissue cooling effects, H121
 muscle and skin, albumin flux and volume flow in, H458
 phorbol diester-stimulated contraction, myosin phosphorylation in (swine), C719
 proximal colon, electrical slow waves, membrane potential effects, C828
 regional differences, response to neuropeptides, G787
 taenia coli, magnesium activation of (guinea pig), C465
 vascular
 acetate and cAMP in, H1378
 adenosine effects on calcium influx, H1492
 calcium-activated potassium channels, H754
 intramural lymphostasis and, H1289
 myogenic activity (pig), H1554
 oxygen consumption of calcium ions, carotid artery (pig), C393
 oxygen free radical effects, diabetic aorta, H825
 phosphoinositide metabolism, H1476
 potassium depletion, hypertension and, H1181
 sodium-calcium exchange, mesenteric artery, C323
 villous, neurohumoral control, G162
 visceral, gallbladder muscularis smooth muscle cells, G653

Muscle cells
 aortic smooth, calcium-activated potassium channel, cAMP effects, H754
 cardiac, carbon monoxide in, C291

SUBJECT INDEX TO VOLUME 255

functional gradients, gallbladder, cystic duct, and common bile duct, G647

muscularis smooth, gallbladder, culture behavior, G653

organ and smooth cultures, cholesterol metabolism, aorta, fetus, H160

smooth

- calcium-activated potassium channel, aortic media, H410
- contraction, prostaglandin effects, colon, G807
- vascular smooth

cGMP response to ANF, spontaneous hypertension, C573

epidermal growth factor-mediated effects (horse), C447

hypertension, reduced sodium-potassium-chloride cotransport, C169

Muscle fiber

- individual, metabolite concentrations, stimulation and, C543
- size properties, tibialis anterior motor units, C43
- types

glycogen storage during insulin stimulation, E621

insulin resistance, obesity, E374

sprint running and (lizard), R470

Myeloperoxidase, myocardial reperfusion injury and, H1060

Myenteric plexus, synaptic behavior, distal colon (guinea pig), G184

Myocardium

- calcium currents, hypertrophied myocytes, H1434
- contractility, superoxide anion and, H138
- coronary veins, nutritional capacity and pressure-flow relations, H834
- hypertrophied

ATP-sensitive potassium channels, H1254

microvascular perfusion, renal hypertension, H1384

infarction, L-thyroxine treatment, H801

isolation of translation-inhibiting peptides, H1024

metabolism, coronary flow and, endotoxicemia effects, H1295

perfusion injury, neutrophil accumulation relations, H1060

rate of relaxation, separation from chamber stiffness, H1468

segmental length, effects of LTC₄ and Tx_A₂, H153

stretch, oxygen consumption in potassium-chloride arrested heart, H807

stunned, electrical and mechanical arrest effects, H60

ventricular, refractoriness, hysteresis in, H1342

wall thickness

- asynchrony, awake state, H358
- selective cardiac denervation and, awake state, H525

Myocytes: *see also* Cardiomyocytes; Heart cells, Ventricular cells

- atrial, calcium-antagonistic effects of adenosine (guinea pig), H872
- calcium current, antibody enhancement of, H960
- cardiac

attachment and maintenance, C19

cytosolic free calcium and respiratory rate relations, H347

deenergization, calcium dynamics and, C162

growth, carbon monoxide effects, C291

ventricular

- calcium currents in, H1434
- hypertrophied, ATP-sensitive potassium channels, H1254
- phenylephrine effects on calcium current, H1173

Myoelectric activity

- intestinal

intraluminal nutrient effects, G12

ketocyclazocine and, G566

motility and anaphylaxis, intestinal, G505

Myoelectric complex, migrating, sphincter of Oddi (opossum), G619

Myofibrils, subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917

Myogenic activity, coronary arterioles (pig), H1554

Myogenic tone, pulmonary arteries, H1391

Myoglobin, renal failure induced by, F539

Myometrium, pregnancy, α_2 -adrenoceptors in (guinea pig), E272

Myosin, heavy chains, cardiac, separation of, H659

Myosin isoenzyme, composition, myocardial infarction treatment, H801

Myosin light chain kinase, cross-bridge cycling, smooth muscle, model, C86

Myosin light chain phosphorylation length dependence, smooth muscle contraction (swine), C473

phorbol diester-stimulated smooth muscle contraction (swine), C719

smooth muscle contractions and, C34

smooth muscle (guinea pig), C465

strontium effects, smooth muscle (pig), C401

Myotubes, skeletal, aerobic capacity, hemin effects, C519

N

Naloxone

- cardiac baroreflex properties, differentiation, R654
- development of hypertension and, E839
- endogenous, involvement in gastric emptying of fat test meals, G158
- modulation of baroreflexes, hypertension and, H987

myoelectric activity and, intestine, G566

organ blood flow and, during endotoxic shock (pig), H177

organ perfusion and, during endotoxin shock, awake state, H1106

Naltrexone, CCK interactions, behavioral evidence, neonate, R901

Natriuresis

- ANF

dose response and pharmacokinetics, kidney, R929

release, hypophsectomy, R534

secretion, renal responses, F936

ANP receptors, inner medullary collecting duct cells, F324

during atrial distension, plasma atriopeptin decline and, R259

exaggerated, essential hypertension, ANP role in, F1085

hypothalamic factor regulation of, renal cells, F574

low-dose ANP infusion and, anesthesia, R449

pressure

- interstitial hydrostatic pressure during, hypertension, R756
- NE-ACTH hypertension and, R894
- pressure-dependent, low concentrations of ANP and, F391

renal activity of ANF, cGMP as biological marker of, F1220

renal nerves, volume expansion and (monkey), R388

salt adaptation, ANF and (fish), F1281

vasopressin effects, E449

Natural killer cells, cytotoxicity, CRF effects, R744

Neoglycoproteins, clearance of glycosylated α -amylase, G374

Neonate: *see also* Infant; Newborn

- behavior, CCK-opiate interactions and, R901
- gap junctional channels, heart cells, H770
- hyperthermia effects, cerebral metabolic rate and blood flow (pig), H343
- independent ingestion, CCK effects, R14
- postnatal undernutrition, bronchiolar epithelial development and, R521
- pulmonary circulation, perfusion effects (lamb), H1336
- ureteral obstruction, renin-angiotensin system response to relief of (guinea pig), F1070

Neostigmine, hyperglycemia, CNS-mediated, E920

Nephrectomy

- insulin-like growth factor I receptors, E504
- thirst mechanisms, R217
- unilateral, compensatory growth and, F270

Nephrocalcin, crystal absorption, growth slowing and, F1197

Nephron

- cellular ATP along, substrate specificity, F977
- distal, potassium regulation, aldosterone and, F811
- juxtaglomerular, amino acid transport, F397

Nephropathy, potassium depletion, renal epithelial cell growth, F868

Nephrotoxicity

- gentamicin, microsomal protein synthesis inhibition, F265
- iron and, F539

NE: *see* Norepinephrine

Neural control

- contraction rate, sphincter of Oddi (opossum), G619
- immune function, R744
- rectal gland (shark), R212

Neural lobe, blood flow, during hypercapnia, R295

Neuroblastoma cells, cell cycle dependence, inositol phosphate effects, C531

Neuroeffector system, vascular α -adrenergic, diabetes, H1036

Neurogenic factors, arterial pressure, awake state, R693

Neurohumoral control, villous motility, G162

Neurohypophysis, hypercapnia, blood flow during, R295

Neurokinin, effects on antral muscle, G779

Neuromuscular transmission, insulin effects, soleus axon function, C60
 Neuronal activity, during sleep (squirrel), R1008
 Neurons
 afferent, capsaicin treatment, intestinal satiety and, R569
 deep muscular plexus, [³H]saxitoxin as marker for, G462
 fast synaptic cholinergic activation, celiac ganglia, G759
 inhibitor, internal anal sphincter (opossum), G389
 myenteric, synaptic behavior, distal colon (guinea pig), G184
 myenteric and submucosal, localization of serotonin receptors, G603
 neurosecretory, inhibition by subfornical organ and anteroventral third ventricle, R961
 plexus, cardiac, activity, H789
 sympathoexcitatory, GABA-mediated inhibition of, R605
 ventromedial hypothalamic, endogenous sugar acid effects, R134
 Neuropeptides
 autonomic nervous system, natural killer cytotoxicity and, R744
 comparison of effects, heart rate, H311
 gastric functions, CNS regulation of, G298
 responses and mechanics, proximal and distal colon, G787
 Neuropeptide Y
 calcium mobilization, erythroleukemia cells, E880
 release, pancreas (pig), G46
 Neurotensin
 chronotropic effects, heart rate, H311
 growth stimulation, small intestine, G813
 immunoneutralization, gastric acid secretion and, G40
 responses and mechanics, proximal and distal colon, G787
 tracheal and phrenic responses to, ventral medulla, R780
 tracheal and phrenic responses, ventral medulla, R780
 Neurotransmission, noradrenergic, adenosine role in, H386
 Neutrophils
 accumulation
 myocardial perfusion injury and, H1060
 myocardial reperfusion injury, H1188
 ischemia-reperfusion injury, isolated perfused kidney, F728
 stimulated response, diacylglycerol kinase inhibitor R59022, C589
 Newborn: *see also* Infant; Neonate
 cerebral blood flow, sympathetic regulation during seizures (lamb), H563
 postischemic generation of superoxide anion, brain, H401
 Nicotinamide, inhibition of phosphate transport, renal brush-border membrane vesicles, F15
 Nicotine, afferent autonomic reflexes and, myocardial ischemia, H26
 Nicotinic acid, injection, metabolic control of feeding and, R82
 Nifedipine
 gastrin and somatostatin release, stomach, G627
 venous volume and tone, forearm, H947

Nitrate, glutathione efflux and, hepatocytes, G403
 Nitrendipine, hormone release and, pituitary tumor cells, E137
 Nitric acid, blockade, cerebral vasodilation, H847
 Nitric oxide, arterial smooth muscle, H207
 Nitrogen, balance, protein metabolism during bedrest, E548
 Nitroglycerin
 independent blockade, cerebral vasodilation, H847
 oxygen free radical effects, endothelium-dependent relaxation of diabetic aorta, H825
 vasodilatory therapy effects, pulmonary hypertension, model, H1232
 venous volume and tone, forearm, H947
 Nitroprusside
 cGMP and, renin release, F474
 hydraulic conductivity and, cortical collecting tubules, F841
 Nocodazole, antidiuretic response and, urinary bladder (frog), F1098
 Nomarski imaging, fluorescence and, video microscopy of cells, C566
 Noradrenergic nerves, purinoceptors, internal anal sphincter (opossum), G389
 Noradrenergic system, myoelectric activity, intraluminal nutrient effects, intestine, G12
 Nordihydroguaiaretic acid, inhibition of oxygen response, cheek pouch arterioles (hamster), H711
 Norepinephrine
 adenosine and noradrenergic neurotransmission, H386
 β -adrenergic mechanisms and, insulin action, E33
 ANF vasodilatory action and, glomerular afferent arterioles, F415
 ANP secretion stimulated by, methacholine inhibition, H1429
 arterial, changes in coronary occlusion, H704
 bicarbonate secretion and, gastric, G752
 chloride transport and, corneal epithelium (frog), C724
 cold and diet effects, skeletal muscle, E180
 excretion, during leg exercise, H15
 glucose metabolism and, endotoxemia, E629
 hypertension, response of large artery diameter, H36
 hypotension and, mature and immature fetus (lamb), R67
 intestinal response, G18
 intravenous endothelin effects, awake state, R1064
 neuronally released, renin release by, F614
 pial arteriolar responses to, trigeminal c. tomy effects, H1
 plasma renin activity and, awake state, E793
 renin and vasopressin release, ANP inhibition, R368
 responses to angiotensin II, antiserum to angiotensin-binding protein, H1542
 temperature regulation and (goldfish), R600
 turnover
 adrenalectomy effects on brown fat metabolism, E597

cardiac hypertrophy, H452
 genetic hypertension, H729, H736
 iron deficiency and, environmental temperature effects, R90
 vagal activity, hypotensive lower-body negative pressure effects, R149
 vascular reactivity and, saphenous vein, H860
 venomotor responses, central and local hypoxia, H760
 Nuclear magnetic resonance
 cytoplasmic magnesium concentration, platelets, H855
 phosphate 31, energy-depleted normoxic heart, C192
 phosphate metabolites, renal, F581
 phosphorus 31, intracellular pH, skin (frog), F126
 5'-Nucleotidase, marker, deep muscular plexus neurons, G462
 Nucleotides
 guanine, phospholipase C and, C667
 metabolism, glomerular, F635, F647
 Nucleus tractus solitarius
 cardiovascular changes, area postrema stimulation and, R855
 microinjection of ANF, cardiovascular responses, R182
 Nutrients
 absorption, regulatory signals for, intestinal, G151
 intraluminal, effects on intestinal myoelectric activity, G12
 Nutrition, enteral, amino acid protein metabolism, R303

O

Oat bran, colonic transit time and, radiographic analysis, G633
 Obesity
 abnormal regulation of cAMP, pancreatic islets, E833
 ACTH, adrenocortical cell responsiveness to, E229
 CRF effects, food intake and brown fat thermogenesis, E255
 DHEA administration effects, liver metabolism, E1
 dietary, 3-OHB and insulin effects, model, R974
 genetic, food restriction and adrenalectomy in, R787
 growth and, acceleration by group housing, R128
 insulin receptors, BRL 26830A effects, E101
 insulin resistance, muscle, E374
 meal frequency, energy utilization and, R616
 oxygen consumption, forearm, measurement, E572
 regulation of energy stores, E332
 sympathetic activity, hypothalamic lesions, R507
 thyroid hormone transport impairment, E54
 3-OH: *see* 3-Hydroxybutyrate
 Olfactory bulb
 anoxia
 evoked potential activity and (turtle), R478
 orthodromic field potentials (turtle), R485
 Oligonucleotide probe, inborn errors, physiological processes revealed through, F1047

SUBJECT INDEX TO VOLUME 255

Omeprazole, valinomycin stimulation, gastric acid formation, G313

Oncogenes, expression, junctional permeability and, C674

Oocytes

- cardiac sarcolemma, sodium-calcium exchange activity (toad), C870
- follicle-enclosed, GnRH effects (goldfish), R268

Opiums

- CCK interactions, behavioral evidence, neonate, R901
- endogenous, involvement in gastric emptying of fat test meals, G158
- modulation of baroreflexes, hypertension and, H987

Opioids

- endogenous, naloxone effects on hypertension, E839
- organ blood flow and, endotoxic shock (pig), H177
- organ perfusion and, during endotoxic shock, awake state, H1106
- receptors: *see* Receptors

Oral mucosa, active electrolyte transport, G286

Ornithine decarboxylase

- gastric mucosal, gastrin effects, G305
- gene expression, CCK effects, pancreas, G818
- renal, compensatory growth and, F270

Osmolutes

- major organic, renal inner medulla, in dehydration, F626
- survey, renal cell lines, C181

Osmoregulation

- ontogeny, implications for, kidney (lizard), R760
- osmolutes, renal cell lines, C181
- salt adaptation, ANF and (fish), F1281
- vasotocin-induced antidiuresis (kelp gull), R936

Osteoblast

- inositol polyphosphates and diacylglycerol, PTH elevation of, E660
- pH and DNA synthesis, parathyroid hormone effects, E9

Osteoclasts, changes, after weightlessness in short spaceflight, R243

Osteoporosis, disease, glucocorticoids and, E875

Ouabain

- binding, sodium-potassium-ATPase isoforms and, E912
- endolymph production and, semicircular canal (shark), F711
- hypercalcemia and, ANP release, E437
- membrane potential, parotid acini, C508
- membrane potential and glutathione efflux, hepatocytes, G403
- potassium-rubidium fluxes resistant to, volume and anion dependency, erythrocytes (sheep), C331
- proatrial natriuretic factor secretion and, atrial cardiocytes, E383
- sodium-potassium pump, insulin and, E953
- sodium-potassium transport and, skeletal muscle, E604
- uptake, endocytosis, atria (guinea pig), C479

Oxidant injury, renal failure, postischemic acute, F450

Oxidants, cultured epithelial cell monolayers, C781

Oxidation, succinate, sodium effects, intestine, C95

Oxidative capacity, adenine nucleotides, skeletal muscle fiber types, C271

Oxidative injury, renal proximal tubules, C28

Oxygen

- consumption
- blood flow relations, muscle, H1004
- calcium ions, carotid artery (pig), C393
- dopamine effects, cortical tubule cells, F666
- during urethan anesthesia, R73
- endotoxemia effects, heart, H1295
- lateral hypothalamic lesions, E708
- left ventricular, H366
- measurement, forearm, E572
- myocardial, adult vs. immature (guinea pig), H1460
- myocardial respiratory control, H185
- myocardial, Windkessel model, H742
- potassium-chloride-arrested heart, H807
- sympathetic nervous system and brown fat effects, E617
- transport-related, benzodiazepine effects, kidney medulla, C385
- triacylglycerol secretion and, liver, E306
- content, blood, H1545
- deficit, hypoxanthine and lactate concentrations (lamb), H53
- dysfunction, renal proximal tubules, C28
- elevated ambient, autoregulation in mesentery, H131
- exercise at reduced blood flow, limb muscle, H1156
- generation, diacylglycerol kinase inhibitor R59022, C589
- partial pressure, estimation of oxygen content in blood and, H1545
- responses, lipoxygenase inhibitor effects, cheek pouch arterioles (hamster), H711
- stress, glutathione and, renal proximal tubules, F874
- tension, blood flow relations, muscle, H1004
- transport
- postnatal intestinal circulation and (swine), H1144
- rheology and, functional hyperemia (hamster), H236
- uptake
- during β -adrenergic blockade, H77
- respiratory rate relations; myocytes, H347

Oxygen-18, presence in water, measurement by infrared absorbance, R175

Oxygenation, cerebral response to, fetus in utero (sheep), R1049

Oxygen metabolites, ischemia-reperfusion injury, kidney, F728

Oxygen radicals

- endothelium-dependent dilation and coronary resistance bed, H765
- diabetic aorta, H825
- free
- acute renal failure and, F539
- postischemic acute renal failure, F450
- papillary muscle tension and, H138

Oxyphorol, intracellular pH and inorganic phosphate content, heart, H189

Oxytocin

- cation content and electrophysiology, skin epithelium (frog), C357

hydrosmotic effects, calcitonin and, bladder (toad), E613

molecular events in expression of, cognate receptors and, F207

P

Pacemaker

- activity, colonic smooth muscle, C653
- circadian, inhibitor of protein synthesis phase shifts (hamster), R1055

Pacemaker complex, baroreflex modulation, heart rate and atrial activation, H503

PAF: *see* Platelet-activating factor

Pancreas

- cell uncoupling, protein kinase C and, C699
- exocrine
- secretion, PP role in, G535
- secretion, repeated trypsin inhibitor treatment, G236
- glucose intolerance, thyrotoxicosis, E843
- growth, after partial resection, G670
- neuropeptide Y release (pig), G46
- ornithine decarboxylase gene expression, CCK effects, G818
- secretion
- CCK regulation of, G498
- endopeptidase 24.11 and, G676
- zymogen granules, potassium transport, C705

Pancreatectomy, pancreatic growth after, G670

Pancreatic acini

- amylase secretion, caerulein effects, G33
- CCK antagonist, G261
- CCK binding (guinea pig), G106
- cell line, somatostatin receptors on, G113
- cells
- gallbladder and, CCK receptors on, G512
- G protein stimulation of PI hydrolysis, CCK and, E652
- cell uncoupling, protein kinase C and, C699

Pancreatic acinar cells

- agonist-sensitive calcium pool in, G221, G229
- potassium currents, patch-clamp study (guinea pig), G275
- processing of CCK, G738

Pancreatic cells

- β -cells
- glucose inhibition of insulin, diazoxide effects, E422
- glucose tolerance, epinephrine effects, E668
- insulin release, furosemide effects, E591

Pancreatic enzymes, secretion, CCK receptors on, G512

Pancreatic hormone, basal secretion, non-adrenergic sympathetic neural influences, E785

Pancreatic islets

- abnormal regulation of cAMP, obesity, E833
- discrimination, hexose anomers, computer analysis, E189, E201
- prolonged hypothermia, insulin and substrates in, R1035

Papillary muscle: *see* Muscle, heart

Parabrachial nucleus, stimulation, sympathetically mediated pressor response and, H1349

Parasympathetic nerves, neurohumoral control, villous motility, G162

Parasympathetic regulation, neuropeptide Y release, pancreas (pig), G46

Parathyroid hormone

- ammoniogenesis and, renal proximal tubular segments, F847
- exchangeable calcium and blood flow, bone, H94
- immunoreactivity, brain, (tetrapod vertebrates), R635, R643
- infusion effects, phosphate deprivation, F96
- inositol polyphosphate and diacylglycerol, osteoblast-like cell line, E660
- peripheral metabolism, E886
- pH and DNA synthesis, osteoblasts, E9
- phosphaturic effect of, β -receptors in resistance to, R557
- regulation of 1,25-dihydroxyvitamin D synthesis, E730
- resistance, verapamil effects, E702
- sodium-hydrogen exchange and, renal cells (opossum), C76
- synthesis and secretion, calcium effects, E299
- synthetic tumoral related peptide, cAMP production and inorganic phosphate transport, F957
- tubular adaptation, phosphate reabsorption, F278

Paratrigeminal nucleus, progressive activation, during hibernation (squirrel), R178

Paraventricular nucleus

- angiotensin II receptors, DOCA-salt hypertension, H646
- blood flow, during hypercapnia, R295
- lesions, angiotensin II drinking and pressor responses, R882
- neurons, inhibition by subfornical organ and anteroventral third ventricle, R961
- stimulation, gastroduodenal mucosal necrosis and, R861
- vasopressin and catecholamines, chronic sinoaortic denervation effects, R768

Parietal cells, gastric, inositol lipid turnover, G99

Parotid acinar cells, inositol trisphosphate formation, desensitization by substance P receptors, C149

Parotid acini, membrane potentials, potassium transport and, C508

Parotid gland

- calcium uptake, hydrogen-dependent, G429
- zymogen granules, potassium transport, C705

PC-12 cell line, dopamine release, PAF effects, C559

PDGF: *see* Platelet-derived growth factor

Pectin, colonic transit time and, radiographic analysis, G633

Pentagastrin, potassium currents and, pancreatic acinar cells (guinea pig), G275

Pentobarbital, pulmonary vasoregulation and, after hypoperfusion, H569

Pentobarbital sodium, VIP effects and, vascular conductance, R968

Peptidases, regulatory signals for, intestinal, G151

Peptide hormone, cardiovascular, renal, and endocrine response, awake state, R1064

Peptides: *see also* Polypeptides

- CCK-8, gastric emptying and feeding behavior, R21
- secretion, nonadrenergic sympathetic neural influences, E785
- translation-inhibiting, isolation from myocardium, H1024
- tumoral PTH-related, cAMP production and sodium-dependent phosphate transport, F957
- vasoactive, C3a, pulmonary artery responses, H1227
- vasoactive intestinal blood flow and secretion and, salt gland (duck), R575
- internal anal sphincter relaxation, G571
- lower esophageal sphincter, G441
- neural control of rectal gland (shark), R212
- vascular conductance and, anesthesia effects, R968

Peptone, meals, gastric emptying and, G685

Perinatal period, gene expression, ANF, E388

Perineurium, solute transfer, compartmental analysis, R317

Peripheral nerve, solute transfer, compartmental analysis, R317

Peripheral vascular disease, epidermal growth factor, vascular smooth muscle cells (horse), C447

Peristalsis

- esophageal response to distension (opossum), G587
- high-amplitude propagated contraction, colon, G660

Permeability

- ammonium, thick ascending limb, F57
- anions, bumetanide effects, intestine (flounder), C246
- capillary
- acute postburn edema and, H1069
- adrenergic-histaminergic interactions, neural, H426
- albumin flux and volume flow in, H458
- endothelial
- lung lymph flow during increased blood flow, H1149
- water and albumin, bacterial exotoxin effects, C368
- epithelial, oxidants and, C781
- junctional, altered, oncogene expression, C674
- membrane, chloride ions, corneal epithelium (frog), 724
- sodium chloride, hormone effects, medullary collecting duct, F421
- solutes, blood-nerve barrier, R317
- tight junctional, hepatocytes, hormonal regulation of, G454
- vascular, during bacteremia (sheep), H1421
- water
- calcitonin inhibition, bladder (toad), E613
- cell membrane, proximal tubules (salamander), F188
- histidine effects, bladder (toad), F685
- temperature effects, endothelial cells (calf), C311

Pertussis toxin

- cAMP and, obesity, pancreatic islets, E833
- cholinergic inhibition of somatostatin sensitive to, D-cells, G424
- diuresis, α_2 -adrenoceptor agonist-induced, F317
- renal vasoconstriction, adenosine-induced, H885
- substrate, tonic inhibition of response to vasopressin, kidney, F1107

PGE₂: *see* Prostaglandin E₂

PG: *see* Prostaglandins

pH

- arterial, hypoxic and, awake state (sheep), R274
- blood, catecholamine release and (trout), R395
- cell
- collecting duct, fluorescent characterization of, F1003
- sodium-hydrogen exchange activity and, lens epithelium (toad), C595
- cell death and, ATP-depleted hepatocytes, C315
- chloride absorption and, intestine (flounder), G247
- citrate reabsorption and, proximal convoluted tubule, F301
- cytosolic, proximal tubules, F787
- depression, parathyroid hormone and, osteoblasts, E9
- estimation of oxygen content and, blood, H1545
- intracellular
- control, renal cells (opossum), C76
- energy-depleted normoxic heart, C192
- inorganic phosphate content and, heart, H189
- skin (frog), F126
- sodium-hydrogen antiport mutant of LLC-PK₁, C495
- whole-cell potassium currents, early distal tubule cells (frog), F699
- intragranular, potassium transport, pancreas and parotid gland, C705
- ionic strength effects and, liver mitochondria, C304
- luminal, ammonia loss and, proximal tubule, F861
- principle cells, skin (frog), F922, F930
- recovery kinetics, atrial cells exposed to lidocaine (frog), H1558
- secretin release, small intestine, G7
- systemic, lactic acid generation and, forearm exercise, F479

Phenidone, inhibition of oxygen responses, cheek pouch arterioles (hamster), H711

Phenoxybenzamine

- ANP release and, E437
- plasma renin activity and, awake state, E793

Phentolamine

- adrenergic-histaminergic interactions, neural, hindpaw, H426
- adrenergic stimulation and, ANP release, E260
- α -adrenoceptors and, microvascular smooth muscle, H121
- blood flow during hypercapnia and, neuropephysis and hypothalamus, R295

Phenylalanine, kinetics, time course of cortisol action, E366

SUBJECT INDEX TO VOLUME 255

Phenylarsine oxide, denervation and, hormone-stimulated glucose transport, E159

Phenylephrine
calcium current and, ventricular myocytes, H1173
glutathione metabolism and, hepatocytes, E801
inhibition of ANP secretion, H1429
ontogeny of anorexia, R908
pressor responsiveness, estrous cycle, R1041

Phenylephrine hydrochloride, ANP release and, E437

8-Phenyltheophylline
acetate-increase in blood flow and, portal, G417
jejunal hyperemia, food-induced, G168

Phloretin, transport site, urea, skin (toad), F429

Phlorizin, binding, organization of epithelial membrane, C745

Phorbol diester, smooth muscle contraction stimulated by, myosin phosphorylation in, C719

Phorbol esters
ANP secretion and, cardiocytes, H405
protein kinase interaction, colonic cell line, G27
sodium-hydrogen exchanger, liver, G346
somatostatin release and, D-cells, G424
vasopressin effects, glomerular mesangial cell growth, F898

Phorbol 12-myristate 13-acetate, DNA synthesis and pH depression, osteoblasts, E9

Phosphate
deprivation
cAMP analogue infusion effects, F96
hypoparathyroidism, E730
renal adaptation to, pituitary involvement in, R373

high-energy
after isometric contraction, skeletal muscle, C145
circulatory occlusion, skeletal muscle, C140
cultured myocyte attachment and maintenance, C19

inorganic
ANP-mediated excretion, renal ablation, F1091
pH and, heart, H189
sodium cotransport, kidney cells, C155
transport, synthetic tumoral PTH-related peptide effects, F957

reabsorption
changes in tubular capacity for, F278
parathyroid hormone, β -receptors and, R557

transport
renal brush-border membrane, niacinamide effects, F15
renal, humor hypercalcemia of malignancy and, F1078
renal, metabolic acidosis in senescence, F1183
succinate effects, proximal tubule, F1170

Phosphate metabolites, renal, NMR studies of, F581

Phosphatidylcholine, acylation in microsomes, theramly acclimated liver (trout), R923

Phosphatidylinositol, turnover, neuroblastoma cells, C531

Phosphaturia, mechanism, administration of phosphonoformate, F984

Phosphocreatine, depletion, normoxic heart, C192

Phosphodiesterase
cyclic nucleotide, activity, postnatal maturation, papillary muscle, H335
inhibitor, glomerular afferent arterioles, F415

Phosphofructokinase
after isometric contraction, skeletal muscle, C145
organ-specific control of glycolysis, anoxia (turtle), R774
pancreatic islet discrimination of, computer simulation, E189, E201

Phosphoinositide
hydrolysis, vasopressin stimulation of, LLC-PK₁ cells, C502
metabolism
aorta, H1476
volume regulation, blood cells (skate), R982

Phospholipase, dexamethasone effects, one-kidney, one-clip hypertension, H717

Phospholipase A₂, secretion, trypsin inhibitor treatment effects, G236

Phospholipase C, activation, prostaglandins and thromboxane A₂, mesangial cells, F1059

Phospholipids
increased SR N-methylation, skeletal muscle, E347
inositol, metabolism, aorta, H1476
orally fed, absorption and metabolism, G612
time course of thermal adaptation, kidney plasma membrane (trout), R622, R628

Phosphonoformate, administration, mechanism of phosphaturia and, F984

Phosphorus, high-energy, ischemic skeletal muscle, C377

Phosphorylation, cross-bridge, strontium effects, smooth muscle (pig), C401

Photoperiod, maternal history, infant development and (vole), R831

Phrenic nerve, response to neuropeptides, ventral medulla, R780

Pial arterioles, response to hypertension or norepinephrine, trigeminalectomy effects, H1

Pineal gland
melatonin entrainment, activity rhythms and, female, R237
reproductive quiescence induced by melatonin, exercise inhibition (hamster), R718
suprachiasmatic nucleus, melatonin and, R332

Pinna, oscillating heat flow from, R464

Pirenzepine, flow-induced enhanced relaxation, acetylcholine, H446

PI: see Polyphosphoinositide

Pituitary
anterior, prolactin release, TRH and BAV K 8644 effects, C633
circadian variation in response, CRF-41 and AVP, E265
LH release, calmodulin antagonist effects (calf), E59
LH response, steroid effects on, E314
luteinizing hormone release, calcium and sodium role in (calf), E469

PTH-like immunoreactivity (tetrapod vertebrates), R635, R643

renal adaptation to phosphate deprivation, R373

response to bacterial endotoxin, during growth, E525

Pituitary cells, anterior aggregates, angiotensin II activity, hypertension, R407

Pituitary tumor cells, hormone release, calcium channels and, E137

Placenta: *see also* Fetus; Lactation; Pregnancy
microvillous membrane, chloride transport, fluorescence measurement, C789

Plasma
constituents: *see* specific constituent flow, renal, amino acid and hormone level effects, F444
pancreatic polypeptide concentration, peak, exocrine pancreas secretion and, G535

Plasma membrane: *see* Membrane

Platelet-activating factor
dopamine release and, PC-12 cell line, C559
pulmonary vascular response, awake state (sheep), H434
superoxide dismutase and, necrotizing enterocolitis, G556

Platelet-derived growth factor
mesangial cells, F674
proteins, renal epithelial cells (monkey), F800
pulmonary hypertension and, H1165

Platelets
activation, epinephrine effects, H1276
cytoplasmic magnesium concentration, H855

Plethysmography
radionuclide, venous volume and tone, forearm, H947
strain-gauge, sympathetic tone and vascular resistance, limb, H937

Pleural effusions, formation, superior vena caval pressure elevation effects (sheep), H492

Pleural space, albumin reabsorption kinetics, H375

Pneumocytes, type II, permeability, neutrophil cathepsin C and, C603

Pneumonectomy
compensatory lung growth after, collagen synthesis and degradation, C754
lung growth after, perioperative hypoxemia effects, E65

Poiseuille's law, effective diameter, local vascular resistance and vasomotion, H1240

Polarity, epithelial, reversal, collecting duct chloride transport, F220

Polarization marker, sodium-sugar co-transport system, organization of epithelial membrane, C745

Polyamines, gastric mucosal, gastrin effects, G305

Polyclonal antibodies, against sodium channel protein, renal papilla, C835

Polycythemia, hydration and, exercise-heat stress, R456

Polygerin, renal epithelial cells (monkey), F800

Polyhydric alcohols, accumulation, during dehydration, renal inner medulla, F626

Poly I:C: *see* Polyribonucleic acid
polyribocytidyl acid

Polymorphism analysis, restriction fragment-length, inborn errors, F1047

Polypeptides: *see also* Peptides
pancreatic, role in exocrine pancreas secretion, G535

vasoactive intestinal
desensitization, heart, H601
heart rate and, H311
hypotensive lower-body negative pressure effects, R149

Polyphosphoinositide, hydrolysis, G protein stimulation of, CCK and, pancreatic acinar cells, E652

Polyribonucleic-polyribocytidyl acid, enhancement of slow-wave sleep, R748

Polysaccharides, viscous, postprandial jejunal motor activity, G800

Portal vein
chronic cannulation, new method, G191
excitatory cholinergic innervation, H288
hemodynamics, continuous monitoring, G194

Posture, head-up tilt, renin and vasopressin release, ANP inhibition, R368

Potassium
ammonium absorption and, thick ascending limb, F78
brain and CSF composition, long-term anoxia effects, diving (turtle), R338
conductance
apical membrane, gallbladder (guinea pig), C808
enteric neurons, G603
depletion
alkalosis, F763
antihypertensive effects in renovascular hypertension, H1181
protease effects on adenylate cyclase, kidney, F1033
depolarization, renin release by neuronal norepinephrine, F614
diffusion, inside-out patch-clamp recording, H980
double-barreled selective microelectrodes, dibenzo-18-crown-6, C408
evoked potential activity, anoxia and, brain (turtle), R478
excretion
ANF release, hypophysectomy, R534
ANP and, kidney, F907
ANP and volume expansion, F66
vasopressin change effects, R940
external, calcium response of single adrenal glomerulosa cells, E488
low external, sodium-potassium-ATPase mRNAs in response to, C252
peritubular, increase, potassium transport through cortical collecting tubules and, F108
permeability, passive, anions and, red blood cells (sheep), C331
regulation, aldosterone role in, F811
secretion
electrolyte transport and, distal colon, G329
endolymph production and, semicircular canal (shark), F711
subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
transport
adaptation to sodium delivery and, distal nephron, F1269
membrane potentials and, parotid acini, C508

oxytocin effects, skin epithelium (frog), C357
red cell ghosts, C346
zymogen granules, pancreatic and parotid, C705

vascular reactivity and, saphenous vein, H860

Potassium channel
ATP regulated, inside-out patch-clamp recording, H980
ATP-sensitive, hypertrophied ventricular myocytes, H1254

calcium-activated
cAMP modulation of, aortic smooth muscle cells, H754
smooth muscle cells, aortic media, H410

gene transfer, C12

Potassium chloride, oxygen consumption and, arrested heart, H807

Potassium currents
single-channel and whole-cell, patch-clamp study, pancreatic acinar cells (guinea pig), G275
whole-cell, single early distal tubule cells (frog), F699

Potassium-rubidium fluxes, ouabain-resistant, volume and anion dependency, erythrocytes (sheep), C331

Potentials
action, slow-response, reperfusion and, H992
electrical, renal cell volume regulation, F529
end-plate, soleus axon, insulin effects, C60
evoked
activity, anoxia and, brain (turtle), R478
jugular venous pressure effects, H1516
inhibitory junction, lower esophageal sphincter, G441
intracellular, oxytocin effects, skin epithelium (frog), C357
intracellular pH and, skin (frog), F922
membrane
electrical slow waves and, proximal colon, C828
force staircase and intracellular sodium, heart (guinea pig), C798
glutathione efflux and, hepatocytes, G403
hepatic efflux of glutathione, G547
leukotriene C₄ effects, taenia coli (guinea pig), C433
liver, sex differences, G822
organic cation transport, proximal tubules (flounder), R492
parotid acini, C508
potassium conductance, gallbladder epithelial cells (guinea pig), C808
sodium-coupled sugar transport (chicken), C486
succinate effects, proximal tubule, F1170
orthodromic field, anoxia, brain (turtle), R485

PP: *see* Polypeptides, pancreatic

Prazosin
adrenergic-histaminergic interactions, neural, hindpaw, H426
α-adrenoceptors and, microvascular smooth muscle, H121

catecholamine-stimulated acid secretion and, jejunum, G640

dopamine, renal blood flow and, R379

vasoconstriction and, coronary artery (calf), H1452

Preglomerular vessels, renal, angiotensin II receptors in, E16

Pregnancy: *see also* Fetus; Lactation; Placenta
lactation and, effects on sodium appetite, R1020

preglomerular vessels, angiotensin II receptors in, kidney, E16

rauwolscine binding, myometrial α_2 -adrenoceptors (guinea pig), E272

Pressor responses
dorsal or ventrolateral medulla, R709
paraventricular nucleus lesion effects, R882

sympathetically mediated, parabrachial neuron stimulation and, H1349

Pressor systems, support of arterial blood pressure, awake state, H483

Pressure: *see also* Blood pressure
aortic, Windkessel model, H742
arterial
after chloralose (lamb), H419
central control, angiotensin receptors and, H1011
control, after chronic carotid sinus denervation, H910
neurogenic and humoral factors, awake state, R693
paraventricular nucleus lesion effects, R882

vascular volume expansion and (sheep), R846
zero-flow, carotid sinus baroreceptor control, H1305

capillary
blood flow and, control during perfusion pressure, wing (bat), H1114
lipid absorption, intestinal, G690
pulmonary, lung, H1075
carbon dioxide partial, renal cortex, F349, F361

carotid sinus, plasma vasopressin and, H1199

central venous, ANF effects, H685

cerebral microvascular, arginine vaso-pressin effects, H70

endothelium-dependent contraction, carotid arteries, H783

gastric, on-line computer analysis, G794

hydrostatic
proximal tubules (salamander), F188
renal cell volume regulation, F529

interstitial fluid, negative, acute post-burn edema, H1069

interstitial hydrostatic, renal, hypertension, R756

intracranial
elastic parameters, brain, R799
jugular venous pressure effects, H1516

intragastric, cholecystokinin effects, G242

intraluminal, coronary arterioles (pig), H1554

intramyocardial, coronary flow and, model, H664

jugular venous, cerebral autoregulation and, H1516

left atrial, alteration effects on pulmonary vascular pressure-flow relations, H19

left ventricular, rate of development, early sepsis, H699

lower-body negative, hypotensive, vagal activity during, R149

SUBJECT INDEX TO VOLUME 255

lymphatic, catecholamines, carotid occlusion, or hemorrhage effects, H514
mean arterial, vasopressin infusion effects, awake state, R665
microvascular
control during perfusion pressure, wing (bat), H1114
lymph flow during, H1149
oxygen partial, blood sample-transfusion protocol evaluation, R851
pericardial, regional variation, ventricular, H1370
pyloric, waves and tones, topography and measurement, G490
renal artery, sodium excretion during vasodilation and, F828
sinus, pulsatile changes, baroreflex responses and, awake state, H673
stop-flow, peritubular infusion of angiotensin, F383
superior vena cava, pleural effusion formation and (sheep), H492
ventricular, vasopressin effects, H261
Pressure-flow loop, area, energy storage by proximal arteries and, H1405
Pressure-flow relations
baroreceptor control, carotid sinus, H1305
coronary, changes, transition from blood to Tyrode perfusion, H476
nutritional capacity and, coronary veins, H834
pulmonary vascular, altered left atrial pressure effects, H19
systemic, autoregulation, awake state, H44
Pressure-thickness relations, left ventricular systolic wall, isochrones, H1136
Pressure-volume relations
end-systolic
interrelation with pressure-wall thickness relations, model, H679
oxygen consumption and, left ventricular, H366
vascular, ACh measurement of, H690
Proatrial natriuretic factor, secretion, ouabain effects, atrial cardiocytes, E383
Progastin, antral, release after a meal, G665
Progesterogen, oocyte meiosis induced by, GnRH effects (goldfish), R268
Prolactin
binding proteins for, kidney cytosol, E293
lipid biosynthesis and, mammary gland explants, E567
lipid composition and, testes, E442
melatonin and, adults (hamster), R812, R823
secretion, BAY K 8644 stimulation, C633
L-Proline, transport, sodium-dependent, intestinal brush-border membrane vesicles (eel), R648
L-Propionylcarnitine, mechanical recovery during reflow and, heart (swine), H169
Propranolol
acid secretion stimulation, jejunum, G640
adrenergic stimulation and, ANP release, E260
ANP release and, E437
chronotropic effects, heart rate, H311
maturation of responses, fetus (lamb), R794
plasma renin activity and, awake state, E793
serotonin responsiveness and, coronary arteries, H1032
D-Propranolol, three-compartmental analysis effects, thyroid hormone kinetics, E80
Propylthiouracil, circadian period and (hamster), R1
Prostacyclin
excretion, during leg exercise, H15
histamine stimulation of, endothelial cells, C214
phospholipase C activation by, mesangial cells, F1059
pulmonary vascular response to PAF and, awake state (sheep), H434
Prostaglandin E
characteristics, papillary collecting duct cells, F1160
dexamethasone effects, A6 epithelia, C661
Prostaglandin E₁, vasodilatory therapy effects, pulmonary hypertension, model, H1232
Prostaglandin E₂
α-adrenergic agonists and, AVP-dependent cAMP levels, renal tubules, F43
bicarbonate secretion stimulated by, duodenal, G470
epithelial cells, tracheal, C760
modulation, diluting power of thick limbs of Henle, F1145
protein kinase C effects, colonic cell line, G27
smooth muscle cell contraction and, colonic, G807
Prostaglandin F_{2α}, calcium influx induced by, adenosine effects, coronary artery, H1492
Prostaglandins
amiloride and, ventricular reperfusion recovery, H608
ethanol vasoaction and, gastric submucosa, G731
histamine stimulation of, endothelial cells, C214
hypertension reversal and, one-kidney, one-clip hypertension, H717
hyperthermia, cerebral blood flow and (pig), H343
interleukin 1-α-induced fever and, R527
phospholipase C activation by, mesangial cells, F1059
physiological changes, during urethan anesthesia, R73
production, role in vasopressin action, histidine effects, bladder (toad), F685
pulmonary vasculature and, H1499
pump perfusion and, impairment of autoregulation, H280
synthesis, ADH action and, bladder (toad), F74
Prostaglandin metabolites, immunization with, gastrointestinal ulceration and, G723
Prostanoids
muscarinic regulation, pulmonary intravascular volume, H1219
serotonin responsiveness and, coronary arteries, H1032
Protease
adenylate cyclase and, potassium-depleted kidney, F1033
inactivation of lipase, G476
Protease inhibitors, gastric emptying and, G685
Protein
angiotensin-binding, antiserum to, H1542
band 3, immunocytochemical localization, collecting duct, F115
binding, growth hormone and prolactin, kidney cytosol, E293
calcium-binding, role in active calcium transport, renal, F558
cAMP-binding, ADH effects, medullary tubules, F292
cationic, permeability and, type II pneumocytes, C603
clearance
during bacteremia after surgery (sheep), H1421
lymphatic, pulmonary embolism, H1075
cytosolic, kinetics during renal epithelial cell growth, F868
degradation, cardiac fibroblasts, C202
digestion, small intestine, neutral endopeptidase effects, G212
endothelium, albumin effects, H638
excretion, single-nephron, after renal ablation in nephrosis, F1243
guanine nucleotide-binding, cardiac calcium channels in lipid bilayers and, H722
heparin sulfate proteoglycan, content of glomerular epithelial cells, F590
integral membrane, myocardial sarcolemma in ischemia, H467
kinetics, leucine extraction effects, R303
labeled, axonal transport in motoneurons, exercise training and, C731
metabolism
insulin responsiveness of, bedrest, E548
proximal convoluted tubules, F520
noncollagen, compensatory lung growth and, C754
nucleotide synthesis and, glomerular, F647
phosphorylation, epinephrine and platelet activation, H1276
plasma
β-agonist effects, awake state, H592
concentrations, venous pressure and pleural effusions (sheep), H492
separation, cardiac, H659
serum, glomerular permselectivity to (trout), R418
short-term energy balance relations, E332
synthesis
efficiency in pressure overload cardiac hypertrophy, H325
glutamine concentration relations, muscle, E166
heart, β-adrenergic stimulation or hypoxia, E537
inhibition of circadian clock (hamster), R1055
microsomal inhibition, F265
organization of epithelial membrane, renal, C745
Tamm-Horsfall, crystal absorption and growth slowing, F1197
uncoupling
fasting-refeeding cycle effects, E120
GDP binding, E865
Protein kinase, cAMP-binding, ADH effects, medullary tubules, F292

Protein kinase C
activation, prostaglandin E₂ response, colonic cell line, G27
ANP secretion and, cardiocytes, H405
caerulein effects, pancreatic acini, G33
calcium current and contractility, ventricular myocytes, H1173
cell uncoupling and, C699
inositol lipid turnover and, gastric parietal cells, G99
LH response to, gonadal steroid effects on, E314
phorbol diester activation, smooth muscle contraction, C719
R59022, neutrophil response and, C589
sodium-hydrogen exchanger, liver, G346
vasopressin effects, glomerular mesangial cell growth, F898
volume regulatory response, erythrocytes (skate), R982

Proteinuria
glomerular filtration rate and, feeding and aging effects, awake state, F250
nephrosis, renal ablation in, F1243

Proteoglycan, metabolism, glomerular epithelial cells, F590

Proteolysis
limited surface, granulocyte elastase interaction, H651
physiological hypercortisolemia effects, E366

Proton, transport, intracellular pH, skin (frog), F922

Protoporphyrin, biliary excretion, bile acid hydroxylation effects, liver, G382

Proximal artery, energy storage by, pressure-flow loop area measurement and, H1405

Pseudohypoparathyroidism, 1,25-dihydroxyvitamin D synthesis in, E730

PTH: see Parathyroid hormone

Puberty
ontogeny of anorexia, R908
skeletal growth and maturation, sex steroids and, E559

Pulmonary artery
forward diastolic flow in, right atrial contraction, heart (pig), H228
regionally variable, responses to C3a, H1227
stretch-induced contraction, H1391

Pulmonary embolism, endothelial pore sizes in, H1075

Pulmonary hemodynamics, left atrial pressure effects, pressure-flow relations, H19

Pulmonary vasculature, intralipid changes, H1499

Pulmonary veins, muscarinic regulation, intravascular volume, H1219

Pump
calcium ion, coronary artery, superoxide radical effects, C297
chloride, controversy, R677
plasmalemmal calcium ion, transport capacity (toad, pig), C226
sodium, regulation by hypothalamic factor, renal cells, F574
sodium-potassium differentiation; proximal tubule, F552
force staircase, heart (guinea pig), C798
low external calcium effects, C252
peritubular potassium stimulation, F108
stimulation by insulin, E953

Purine nucleotides
binding, brown fat, E865
cycle, intranephron ammoniogenesis and, F1122

Purinoreceptors, influence, internal anal sphincter (opossum), G389

Purkinje fibers, contractility, sodium-calcium exchange in, C278

Puromycin aminonucleoside, effects on heparin sulfate proteoglycan protein content, glomerular epithelial cells, F590

Putrescine, compensatory renal growth and, F270

Pyloreectomy
CCK-8 effects on feeding and gastric emptying, R113
satiety action of CCK and, R1059

Pyloric sphincter, pyloreectomy, satiety action of CCK and, R1059

Pyloroplasty, CCK-8 effects on feeding and gastric emptying, R113

Pylorus
inhibitory opioid receptors, G352
pressure waves and tones, topography and measurement, G490

Pyrimidine maleate, adrenergic-histaminergic interactions, neural, hindpaw, H426

Pyroglutamyl-histidine, carrier-mediated transport, renal brush-border membrane vesicles, C822

Pyruvate, exercise at reduced blood flow, limb muscle, H1156

Pyruvate dehydrogenase, prolactin effects, mammary gland explants, E567

Pyruvate kinase, organ-specific control of glycolysis, anoxia (turtle), R774

R

Radioimmunoassay
atrial distension, ANF release and, isolated heart, R232
liver, ontogenesis of epidermal growth factor, E28
secretin release, small intestine, G7

Radioisotopes, flux measurements, methodological errors in, G696

Raphe nuclei, medullary, stimulation, sympathetic excitatory neurons and, R605

Rauwolscine
binding to adrenoceptors, pregnancy and (guinea pig), E272
vasoconstriction and, coronary artery (calf), H1452

Receptors
 α_2 , mediation of catecholamine-stimulated acid secretion, jejunum, G640
adenosine
calcium mobilization, cortical collecting tubule cells, C581
renal vasoconstriction induced by, H885
adenosine and acetate, portal blood flow increase and, G417
adrenoceptors
ADH action, bladder (toad), F74
antagonism, regional hemodynamic responses, awake state, H813
biogenic amines in acute hypoxia, H329
central and peripheral, blockade, exercise and, R547

rauwolscine binding to, pregnancy (guinea pig), E272
temperature regulation and (goldfish), R600
tracheal epithelial cells, C760

α -adrenoceptors
inotropic sensitivity, early sepsis, H699
vasoconstriction and, finger skin, H1000

α_1 -adrenoceptor, bicarbonate excretion and, urinary, F1116

α_2 -adrenoceptors
GABA regulation, urinary bladder (guinea pig), R888
local tissue cooling effects, H121

β -adrenoceptors
maturation of responses in fetus (lamb), R794

β resistance to phosphaturic effect of PTH, R557
subtypes, glucocorticoid modulation of, brown fat, E153

α_1 - and α_2 -, chloride transport and, corneal epithelium (frog), C724

ANF
cGMP response, spontaneous hypertension, muscle cells, C573
glomerular, during rehydration, F621

angiotensin, subretrofacial nucleus, H1011

angiotensin II
DOCA-salt hypertension, brain nuclei, H646
renal preglomerular vessels, E16

ANP, inner medullary collecting duct cells, F324

ATP, phospholipase and, GTP γ S loading of endothelial cells, C667

atrial, natriuresis, plasma atriopeptin and, R259

baroceptors
arterial, serotonergic mechanisms during hemorrhage, H496
arterial, vasopressin and carotid sinus pressure, H1199

carotid sinus, control of splanchnic resistance, H1305

carotid sinus denervation, H910

regulation of nerve activity, training effects, H974

CCK
after pyloroplasty or pyloreectomy, R113
gallbladder, labeling using probes, G579
gallbladder muscle and pancreatic acinar cells, G512

chemoreceptors, carotid stimulation, coronary dilation and, H1330

cognate, expression of vasopressin and oxytocin, F207

dopamine
ANF effects, and renal, F494
identified by 125 I-Sch 23982, kidney, F970

E. coli enterotoxin, kidney (opossum), F1040

histamine, gastric emptying and (monkey), G767

insulin
renal cortical epithelium, E357

second messenger for, C1

thermogenic agent effects, obesity, E101

SUBJECT INDEX TO VOLUME 255

insulin-like growth factor I, renal glomeruli and tubules, E504

leukotriene, transmembrane signaling, mesangial cells, C771

mechanoreceptors

- cardiopulmonary, gastric bicarbonate secretion and, G752
- vagal gastric, CCK effects, G55

muscarinic

- functional G₁ protein, heart cells, C51
- lower esophageal sphincter, G441
- neurokinin, effects on antral muscle, G779

nuclear steroid, sodium transport stimulation, A6 cells, F736

opioid, inhibitory, pylorus, G352

osmoreceptors, intestinal myoelectric activity, G12

serotonin, localization, myenteric and submucosal neurons, G603

somatostatin, pancreatic acinar cell line, G113

somatotrophin, kidney cytosol, E293

substance P, desensitization of inositol trisphosphate formation, parotid gland, C149

transferrin-iron, erythron, R326

vasopressin

- cardiac effects of vasopressin and, H261
- renal hypertension, H693

VIP, desensitization, heart, H601

Rectal gland, neural control (shark), R212

Red blood cells: *see* Erythrocytes

Reepithelialization, after acute mucosal injury, colon, G62

Reflexes

- activation of sympathetic nervous system, ANF and, H685
- baroreflex

 - angiotensin receptors, subretrofacial nucleus, H1011
 - arterial pressure and, awake state, R693
 - cardiac, differentiation, R654
 - cardiac output measurement with Doppler flow probes, H1206
 - carotid sinus denervation, H910
 - opiate modulation of, H987
 - regulation of nerve activity, training effects, H974
 - sensitivity to vasopressin during estrous cycle, R1041
 - summation, H1244
 - sustained response, sinus pressure effects, awake state, H673

- cardiac

 - hypotension lower-body negative pressure effects, R149
 - natriuresis, plasma atriopeptin and, R259
 - cardiac afferent sympathetic, ischemia effects, H26
 - cardiovascular

 - after chloralose (lamb), H419
 - pentobarital anesthesia effects, H569
 - physiological enteric stimulation, G319
 - chemoreceptor, carotid, sympathectomy and deafferentation, R252
 - chemoreflexes, carotid stimulation, coronary dilation and, H1330
 - pulmonary inflation, coronary circulation and, H866
 - renal, intrarenal bradykinin effects, R994

 - sympathetic activation, gastric bicarbonate secretion, G752
 - vagal

 - ischemia effects, H26
 - nonadrenergic noncholinergic, blood flow, awake state, G522

Refractory period, effective, hysteresis in, ventricular myocardium, H1342

Regulatory cell volume decrease, principal and intercalated cells, cortical collecting tubule, C612

Rehydration

- dehydration and, maternal (sheep), E674
- glomerular ANF receptors during, F621

Renal artery

- constriction, metabolic clearance of ANP, E934
- pressure: *see* Pressure
- responses to angiotensin II, antiserum to angiotensin-binding protein, H1542

Renal nerve

- angiotensin II interactions, during sodium deprivation, F823
- innervation, thick ascending limb of Henle, F340
- sympathetic, ANF effects, R6
- volume expansion and, awake state (monkey), R388

Renin

- adrenergic control, euhydration and water deprivation, awake state, E793
- biosynthesis, F563
- blood, evaluation of sample, R851
- captopril and, renal function, diabetic adults, F755
- granules, renal, Triton WR-1339 in, E353
- hypoxia, awake state (sheep), R274
- intrarenal inhibitor, renal function and, F749
- intravenous endothelin effects, awake state, R1064
- modulation of intrarenal effects, ANP and, F545
- multiple forms, adrenal gland, E531
- natriuresis, atrial stretch and, R259
- plasma activity, ANH hormone effects, sodium depletion, R867
- postural release, ANP effects, R368
- release

 - cGMP and, F474
 - neuronally released norepinephrine and, F614

- renal, hepatic clearance of, glycosylation for, E642
- secretion

 - maternal cortisol secretion effects, fetus (sheep), R412
 - osmotic forces and, F1
 - secretory mechanisms, two pathways, F100
 - thirst mechanisms, R217

Renin-angiotensin system

- awake state, H813
- hypotension and, mature and immature fetus (lamb), R67
- kidney function and, F749
- local control of blood flow, mesenteric, G267
- maturity, fetus (lamb), R794
- mean arterial blood pressure and, awake state, H483
- molecular biology of, F563
- regional hemodynamic responses to adrenoceptor antagonism and H813

response, relief of ureteral obstruction, neonatal (guinea pig), F1070

two pathways, renin secretory mechanisms, F100

Reoxygenation, hypoxia and, early left ventricular filling, H1311

Resistance

- coronary, changes in pressure-flow relations, H476
- electrical, oxidants and epithelial permeability, C781
- endothelial, albumin effects, H638
- fractional, apical membrane potassium conductance, gallbladder (guinea pig), C808
- input, electrical coupling, colonic smooth muscle, C653
- insulin, muscle, obesity and, E374
- membrane, distal tubules (amphibian), F158
- pulmonary vascular, altered left atrial pressure and, H19
- renal vascular, kinins and, F408
- segmental, cerebral circulation, H70
- splanchnic, carotid sinus baroreceptor control of, H1305

vascular

- adrenoceptors and hemodynamics, awake state, H813
- ANP or captopril effects, R737
- during β -adrenergic blockade, H77
- effective diameter, vasomotion and, H1240
- limb, sympathetic tone effects, H937
- mental stress, calf, H1443
- minimum, dehydration and, hindlimb (baboon), H266
- oxygen consumption, tension, and carbon dioxide tension relations, H1004
- portal blood flow, ethanol-induced increase, G417
- ureteral obstruction, renin-angiotensin system and, neonate (guinea pig), F1070
- vasopressin and, during dehydration, awake state, R46

Respiration

- cardiac, activation of dehydrogenase activity and, H185
- cytosolic free calcium and, respiratory rate relations, myocytes, H347
- mitochondrial

 - liver and heart, high altitude, C123
 - microsomal protein synthesis inhibition, F265

- renal, succinate effects, proximal tubule, F1170

Respiratory pattern, timing and, sympathectomy and deafferentation, R252

Rhabdomyolysis, hydroxyl radical role in, F438

Rheology, oxygen transport and, functional hyperemia (hamster), H236

Rhythms

- activity, melatonin entrainment, female, R237
- biological, inhibitor of protein synthesis phase shifts (hamster), R1055
- circadian

 - entrainment by prenatal maternal melatonin injections (hamster), R439
 - insulin sensitivity and, muscle, E41
 - melatonin and suprachiasmatic nucleus, R332
 - muramyl-dipeptide and, R157
 - propylthiouracil effects (hamster), R1

Ribonucleic acid
content, pressure overload cardiac hypertrophy, H325
double-stranded, enhancement of slow-wave sleep, R748
messenger
hepatic epidermal growth factor, E28
renin, angiotensinogen, and ANP, sodium balance effects, E129
sodium-potassium-ATPase, low external potassium effects, C252
poly(A), sodium-calcium exchange activity, oocytes (toad), C870

Rubidium
efflux, calcium influx and, aortic endothelial cells, H219
uptake, dopamine effects, cortical tubule cells, F666

Ruthenium red
myocardial respiratory control, H185
responses of contractile function, heart (frog), H1413

S

Saccharides, spatial map, tongue, R117

Saline
intake, vasopressin and, during dehydration (pig), R249
loading
ANP response, essential hypertension, F1065
atrial resection and, awake state, H144

Salt
absorption, bumetanide effects, intestine (flounder), C246
adaptation, ANF and (fish), F1281
luminal concentration, diluting power of thick limbs of Henle, F1145
spatial map, tongue, R117

Salt gland, blood flow and secretion from, VIP effects (duck), R575

Saphenous vein, reactivity, sodium content relations, H860

Saralasin
intrarenal angiotensin, tubuloglomerular feedback and, F383
responses to angiotensin II and, renal artery, H1542

Sarcoplasmic reticulum
cellular compartmentation, ischemic myocardium, H929
increased phospholipid N-methylation, skeletal muscle, diabetes and, E347
subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917

Satiety
CCK action
neonate, R14
pylorectomy effects, R1059
endogenous sugar acid effects, ventromedial hypothalamic neurons and, R134
fat and, diabetes, R123
gastric emptying and, CCK-8-induced changes, R21
low-dose bombesin effects on food intake, fourth ventricle, R988
postgastric controls, feeding behavior, preweanlings, R191

Saxitoxin, ³H-labeled, marker for deep muscular plexus neurons, G462

SCH 23390
autoregulation, renal blood flow, R379
dopamine receptors identified with, kidney, F970

Sciatic nerve
axonal protein transport, exercise training and, C731
stimulation, ¹⁴C-butanol measurement of, H953

Scintigraphy, colonic transit, G529

Seawater, catecholamine release, acidotic stress and (trout), R395

Secretin, secretion, gastrinoma cells, G596

Secretogogue, LH release induced by, calmodulin antagonist effects (calf), E59

Secretory protein I, synthesis and secretion, calcium effects, E299

Seizures, sympathetic regulation, cerebral blood flow, newborn (lamb), H563

Semicircular canals, endolymph secretion (shark), F711

Sepsis
inotropic sensitivity to β -adrenergic stimulation, H699
interleukin 1, tumor necrosis factor and, energy metabolism, E760
myocardial metabolism and coronary flow with, H1295
pituitary-adrenal response, during growth, E525

Serotonergic mechanisms, renal sympathetic inhibition and, during severe hemorrhage, H496

Serotonin
antigen exposure and, jejunal smooth muscle, G701
coronary artery constriction, flow-mediated attenuation, H1317
differential localization of receptors, myenteric and submucosal neurons, G603
ischemia and reperfusion, cerebral artery response, H879
permeability, cyclooxygenase inhibition and, lung, H1096
responsiveness, coronary arteries, H1032

Sex differences
androgenic influences, body size and composition (monkey), E857
estrous cycle, vasopressin in, R1041
membrane potential, liver, G822

Sex steroids
bone density and, during growth, E416
suppression of growth, skeletal, E559

Shock
defibrillation, unsuccessful, epicardial activation after, H902
endotoxic
naloxone and circulatory changes during, awake state, H1106
organ blood flow, naloxone and ibuprofen effects (pig), H177

endotoxin, glucose metabolism, adrenergic blockade effects, E629
glutathione metabolism and, hepatocytes, E801
heat, myocardial translation-inhibiting peptide, H1024
timing and strength of, induction of ventricular arrhythmias, H891

Short bowel syndrome, membrane transport, after bowel resection, G292

Sialic acid, insulin action and, diabetes mellitus, E173

Sinoaortic denervation, vasopressin and catecholamines in, central, R768

Sinoatrial node, vagal preganglionic somata control of, localization, R703

Sinus node
baroreflex modulation, heart rate and atrial activation, H503
supersensitivity to ACh, after parasympathetic denervation, H534

Skin
cold-induced vasoconstriction, α -adrenoceptors and, finger, H1000
intracellular pH, sodium ions, volume, and cAMP effects (frog), F126
muscles and, albumin flux and volume flow in, H458
principle cells, pH in (frog), F922, F930
urea transport (toad), F429

Skin epithelium, oxytocin effects, cation content and electrophysiology (frog), C357

Sleep
activation of paratrigeminal nucleus, entrance to hibernation (squirrel), R178
enhancement, growth hormone-releasing factor and, R310
fever, muramyl-dipeptide-induced, R157
MSH and interleukin interactions and, R914
non-rapid eye movement, EEG analysis, R27
REM and NREM, neuronal activity during (squirrel), R1008
slow-wave, polyribonucleic-polyribocytidic acid enhancement, R748

Slow-wave activity, EEG, NREM sleep, R27

Sodium
absorption, sugar-stimulated, vertebrates and invertebrates, R583
ANP-mediated excretion, renal ablation, F1091
appetite
angiotensin-related, thirst and (cow), R205
pregnancy and lactation effects, R1020
balance
 β -agonist effects, awake state, H592
renin, angiotensinogen and ANP mRNA levels, E129
brain and CSF composition, long-term anoxia effects, diving (turtle), R338
content, saphenous vein reactivity and, H860
deficiency, voluntary sodium intake and, R1025
delivery, distal tubule and collecting duct adaptation to, F1256, F1269
depletion
ANH effects on renal function and aldosterone secretion in, R867
electrolyte transport and, distal colon, G329
deprivation, angiotensin II and renal nerve interactions during, F823
excretion
ANF release, hypophysectomy, R534
ANP and, kidney, F907
ANP and volume expansion, F66
atrial resection and, awake state, H144
cardiorenal endocrine dynamics, hypothyroidism, R61
during atrial distension, R259
during renal vasodilation, renal artery pressure effects, F828
NE-ACTH hypertension and, R894
renal, intrarenal adenosine effects, F1230
vasopressin change effects, R940

SUBJECT INDEX TO VOLUME 255

extracellular, intracellular pH and, skin (frog), F930
 flux
 intracellular, ischemic skeletal muscle, C377
 sodium-potassium-ATPase-dependent, cortical collecting tubules, F605
 influx, bumetanide-sensitive, medullary vesicles, F1138
 intake, gene expression and, ANF, H245
 intracellular
 positive force-frequency staircase, papillary muscle (guinea pig), C798
 transport, vasopressin effects, bladder cells (toad), F1015
 water flow and, proximal tubules (salamander), F188
 intrarenal effects of ANP, angiotensin II modulation of, F545
 lidocaine and, recovery kinetics (frog), H1558
 luteinizing hormone release and, pituitary (calf), E469
p-aminohippurate transport and, renal basolateral membrane vesicles, F597
 paracellular pathway, cortical collecting duct, F720
 potassium and chloride balance, citrate and bicarbonate excretion, acid-base balance, F182
 potassium regulation, aldosterone role in, F811
 L-proline transport dependent on, intestinal brush-border membrane vesicles (eel), R648
 reabsorption, intrarenal volume expansion and proximal, F1178
 restriction, angiotensin antagonism and ACE inhibition, F944
 subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
 succinate transport and metabolism with, intestine, C95
 sugar transport, intestine (chicken), C486
 transport
 active, buccal mucosa, G286
 adaptation to sodium delivery and, distal nephron, F1269
 dopamine effects, cortical tubule cells, F666
 IGF1 stimulation of, renal (toad), C413
 jejunal brush-border membrane vesicles, G206
 oxytocin effects, skin epithelium (frog), C357
 papillary collecting duct cells, F331, F1160
 renal, cytosolic calcium regulation and, F787
 urinary, ANF and dopamine receptor effects, renal, F494
 voluntary intake, sodium deficiency effects, R1025
 Sodium-ammonium-chloride, potassium effects, thick ascending limb, F78
 Sodium-calcium exchange
 bradykinin and, aortic endothelial cells, H219
 contractile force and, cardiac Purkinje fibers, C278
 myocyte deenergization and, C162
 positive force-frequency staircase, papillary muscle (guinea pig), C798
 regulation, proximal tubules, F787
 respiratory rate relations, myocytes, H347
 sarcolemmal, cardiac, oocytes (toad), C870
 sarcolemmal membrane vesicles, mesenteric artery, C323
 Sodium channel
 epithelial antibodies, renal papilla, C835
 fast inward current, embryonic heart (chick), H540
 Sodium chloride
 absorption
 proximal, F434
 sodium-hydrogen antiport role in, proximal tubule, F461
 high, survey of osmolytes, renal cell lines, C181
 hormone effects on, medullary collecting duct, F421
 hypertonic, thirst mechanisms, R217
 intake
 hydrogen homeostasis, osmolality, and body temperature during, R97
 regulation of carbon dioxide ventilation and, R105
 taste response
 after amiloride, R1002
 strain differences, R424
 taste transduction, tongue, R117
 transport, passive, urinary bladder (flounder), F229
 Sodium chloride absorption, electroneutral, sodium repletion and, distal colon, G329
 Sodium dodecyl sulfate-polyacrylamide gel, electrophoresis, ANP collecting duct receptors, F324
 Sodium-glycine cotransport, canalicular liver plasma membrane vesicles, G253
 Sodium-hydrogen antiport
 activity, renal, acidemia effects, F237
 intracellular pH and, skin (frog), F126
 sodium-chloride absorption and, proximal tubule, F461
 Sodium-hydrogen exchange
 amiloride and, postischemic ventricular recovery, H608
 cell death in hepatocytes, extracellular acidosis effects, C315
 cellular pH and, lens epithelium (toad), C595
 intracellular pH and, skin (frog), F930, F922
 LLC-PK, mutant, sensitivity to amiloride, C495
 mesangial cells, glomerular, C844, C857
 modulation of activity, IMCD cells, F331
 norepinephrine effects, intestine, G18
 regulatory volume increase and, separate control, renal cells (opossum), C76
 renal, metabolic acidosis in senescence, F1183
 sodium-potassium pump modulated by, proximal tubules, F552
 Sodium-inorganic phosphate cotransport, modulation by extracellular phosphate, kidney cells (opossum), C155
 Sodium ions
 absorption, apical membrane, inner medullary collecting duct, F278
 intracellular activity, cardiac Purkinje fibers, C278
 intracellular pH and, skin (frog), F126
 Sodium-lactate cotransport, apical membranes, LLC-PK, cells, F1249
 Sodium nitroprusside
 independent blockade, cerebral vasodilation, H847
 mature and immature fetus (lamb), R67
 Sodium-phosphate-ATPase, uptake, endocytosis, atria (guinea pig), C479
 Sodium-potassium-ATPase
 activity, dopamine inhibition of, cortical tubule cells, F666
 endogenous, regulation of sodium pump, renal cells, F574
 high-ouabain-affinity isoform, thyroid hormone, E912
 sodium flux dependent on, cortical collecting tubule, F605
 sodium-potassium pump modulated by, proximal tubules, F552
 succinate effects, proximal tubule, F1170
 valinomycin stimulation, gastric acid formation, G313
 Sodium-potassium-chloride, cotransport, active ammonium absorption, thick ascending limb, F57, F78
 Sodium-potassium-chloride cotransport
 bumetanide effects, intestine (flounder), C246
 pathways, fibroblasts, C112
 reduced, hypertension and, vascular smooth muscle cells, C169
 regulatory volume increase and, renal cells (opossum), C76
 Sodium-potassium exchange
 independent stimulation, insulin, E953
 thyroid hormone effects, skeletal muscle, E604
 Soleus muscle
 axon function, glucose transport, insulin effects, C60
 insulin sensitivity, circadian rhythm and, E41
 motor units, electromechanical and metabolic properties, C684
 sodium-potassium transport, thyroid hormone effects, E604
 Solutes
 excretion, ANP-mediated, renal ablation, F1091
 inner medullary concentration, ureteral excision effects, F1225
 organic, renal brush-border membrane transport (snake), R52
 transfer, across blood-nerve barrier, compartmental analysis, R317
 Somata, brain stem, controlling cardiac nodes, R703
 Somatomedin, gene expression, muscle, E513
 Somatostatin
 cholinergic inhibition of, D-cells, G424
 GHRF causes biphasic stimulation, hypothalamic cells, E829
 glucose and, glucose kinetics, fetus (sheep), E87
 immunoneutralization, gastric acid secretion and, G40
 neural control, rectal gland (shark), R212
 receptors: *see* Receptors

Somatostatin (continued)
 release, calcium and bombesin in, stomach, G627
 secretion
 gastrinoma cells, G596
 nonadrenergic sympathetic neural influences, E785

Somatotropin, stimulation, 3-O-methylglucose transport, E723

Sonomicrometry, myocardial dysfunction, after acute ischemic injury, H85

Sorbitol
 accumulation, during dehydration, renal inner medulla, F626
 survey, renal cell lines, C181

Soya flour, pancreas resection, growth after, G670

Soybean trypsin inhibitor, ornithine decarboxylase gene expression and, pancreatic, G818

Spaceflight, short, bone changes after weightlessness, R243

Spectrometry, fluorescent, sodium-hydrogen antiporter activity, F237

Spectroscopy
 electron-spin resonance, superoxide demonstration by, H213

NMR
 ischemic skeletal muscle, C377
 organic osmolytes, renal inner medulla, F626

Spermidine, compensatory renal growth and, F270

Spermine, compensatory renal growth and, F270

Sphincter of Oddi, control mechanisms, contraction rate (opossum), G619

Spinal cord, blood flow: *see* Blood flow

Spine, transection, soleus motor units, C684

Spinoreticular cell, response, intrarenal bradykinin, R994

Spiromolactone
 glucocorticoid-induced cation transport and, colon, F1235
 sodium transport and, A6 cells, F736

Splanchnic nerve
 stimulation, bicarbonate secretion and, duodenum, G709
 unequal bulbospinal influences on, R946

Squamous epithelium, developing, blastocyst transport functions, embryo, C419

SRIF: *see* Somatostatin

SR: *see* Sarcoplasmic reticulum

Starch
 energy balance and, adrenalectomized obese mice, R141
 intragastric infusions, conditioned flavor preference, R672

Starvation: *see* Fasting

Steroid hormones
 GnRH sensitivity, underfeeding and, prepubertal females, E482
 gonadal, LH response to arachidonic acid and protein kinase C, E314
 inhibition, ACTH, E241
 plasma protein-mediated transport, E221
 transport, plasma protein-mediated, E403

Steroidogenesis, adrenal, vasopressin effects, R806

Stimulus-secretion coupling: *see* Coupling

Stomach: *see also* entries under Gastric CCK effects, satiety, R14

ethanol vasoaction in, arachidonic acid metabolite effects, G731
 gastrin release, after a meal, G665

Streptozotocin
 diabetes, intestinal hyperemia associated with, glucagon role in, G542
 neuroeffector system, vascular α -adrenergic, H1036

Stress
 acidotic, catecholamine release and (trout), R395
 active tangential, intramural lymphosarcoma and, H1289
 borderline hypertension, cardiovascular and renal responses, R431
 glutathione metabolism and, hepatocytes, E801
 hypoxic, granulocytes and xanthine oxidase in, H1269
 inhibition of ACTH, corticosteroids and, R344
 mental, cardiovascular and sympathoadrenomedullary responses, H1443
 metallothionein response to, E518
 oxidative, MDA content and, skeletal muscle, C874
 psychoneurogenic, corticosterone-releasing effects and, R839

Stroke, brain capillaries, microvascular morphometry during, H623

Strontium, cross-bridge phosphorylation and, smooth muscle (pig), C401

Subretrofacial nucleus, angiotensin receptors in, H1011

Substance P
 effects on antral muscle, G779
 receptors: *see* Receptors
 responses and mechanics, proximal and distal colon, G787

Substrates
 cycle, DHEA and, obesity, E1
 exchange, reduced blood flow and, limb muscle during exercise, H1156
 homeostasis, insulin secretion and, prolonged hypothermia, R1035
 mobilization, regulation during exercise, R400
 renal, thirst mechanisms, R217
 specificity, cellular ATP and, nephron, F977
 tracer methodology, E94

Succinate
 respiration, membrane potential, and potassium, proximal tubule, F1170
 transport and metabolism, sodium effects, intestine, C95

Succinate dehydrogenase, tibialis anterior motor units, C43

Sucrose
 biliary permeability, hormonal regulation of, G454
 taste transduction, tongue, R117

Sucrose gradient, sodium-calcium exchange activity, cardiac sarcolemma (toad), C870

Sucrose-insulin, ^{14}C -labeled, uptake and intracellular fate, liver, C70

Sugar
 ion absorption stimulated by, vertebrates and invertebrates, R583
 transport, sodium-coupled, intestine (chicken), C486

Sugar acid, endogenous, ventromedial hypothalamic neurons and, R134

Sulfobromophthalein, biliary secretion, lipid particles and, G745

Superoxide, electron-spin resonance spectroscopy, H213

Superoxide anion
 granulocytes and, ischemia-reperfusion injury, H1269
 papillary muscle tension and, H138
 postischemic generation of, brain, newborn, H401

Superoxide dismutase, eicosanoid release and, necrotizing enterocolitis, model, G556

Superoxide radical, calcium ion pumps and, coronary artery, C297

Suprachiasmatic nucleus
 circadian rhythm, prenatal entrainment, pup (hamster), R439
 2-deoxy-[^{14}C]glucose uptake, melatonin effects, R332

Supraoptic nucleus
 blood flow, during hypercapnia, R295
 vasopressin and catecholamines, chronic sinoaortic denervation effects, R768

Sweat gland, epithelial cells, different physiological signatures, C102

Sympathectomy, carotid, deafferentation and, R252

Sympathetic activation, asynchrony, regional ventricular denervation, awake state, H358

Sympathetic denervation, supersensitivity, ventricular recovery, H577

Sympathetic nerves
 activity
 cold-enhanced pressor response, spontaneous hypertension, H1018
 exercise training effects, renal, H974
 food intake and starvation effects, R284

cardiac activity, changes in coronary occlusion, H704

cervical, sympathectomy and deafferentation, R252

end, norepinephrine released by, renin release and, F614

neurohumoral control, villous motility, G162

nonadrenergic mediation of, basal pancreatic hormone secretion, E785

reflex activation, gastric bicarbonate secretion, G752

renal
 bicarbonate excretion and, urinary, F1116
 during sodium deprivation, F823

Sympathetic nervous system
 adenosine and noradrenergic neurotransmission, H386

arterial pressure and, awake state, R693

asynchrony, regional ventricular denervation, awake state, H358

augmentation of cardiac function by, early hypertension, awake state, H1525

cold and diet effects, skeletal muscle, E180

CRF effects, food intake and brown fat thermogenesis, E255

deep hypoglycemia, glucoreceptors in carotid perfused tissue, E680

endotoxin-induced fever and, E617

reflex activation, ANF and, H685

regulation
 cerebral blood flow, during seizures, newborn (lamb), H563
 contractile tissue, heart, H1050

SUBJECT INDEX TO VOLUME 255

neuropeptide Y release, pancreas (pig), G46

splanchnic nerve stimulation, bicarbonate secretion and, duodenum, G709

trophic changes in brown fat and, during cold acclimation, R874

venomotor responses, central and local hypoxia, H760

Sympathetic neural effects, nonadrenergic mediation of, basal pancreatic hormone secretion, E785

Sympathetic stimulation, intestinal blood flow during, intramural distribution, H1091

Sympathoadrenal responses, mental stress, H1443

Sympathoexcitatory neurons, angiotensin receptors, binding and pressor effects, H1011

Synaptosomes, muscular plexus, [³H]saxitoxin marker for, G462

Synthase, DHEA treatment and, obesity, E1

T

Tachykinins, effects on antral muscle, G779

Tachyphylaxis

- pulmonary artery responses, C3a, H1227
- spinoreticular cell response, intrarenal bradykinin, R994

Taenia coli

- leukotriene C₄ effects, electromechanical activity and calcium intake (guinea pig), C433
- magnesium activation (guinea pig), C465

Taste: *see* Feeding; Gustatory response

Taurine, transport, renal basolateral membrane vesicles, F88

Taurocholate

- bilirubin glucuronides and, hepatocyte cotransport, G121
- hydroxylated, protoporphyrin excretion and, liver, G382

Tear film, chloride-bicarbonate antiport, lacrimal gland, G367

TEA: *see* Tetraethylammonium

Technetium-99m, venous volume and tone, forearm, H947

Temperature

- acclimation
- acylation of lysophosphatidylcholine, liver (trout), R923
- time course, renal plasma membrane (trout), R622, R628
- ambient, muramyl-dipeptide and, R157
- environmental, norepinephrine turnover in iron deficiency, R90
- regulation
- adrenoceptors and (goldfish), R600
- exercise-heat stress, R456
- tissue cooling, α -adrenoceptors and microcirculation, H121
- water permeability and, endothelial cells (calf), C311

Temperature, body

- brain
- MSH and interleukin interactions and, R914
- muramyl-dipeptide and, R157
- energy balance and, adrenalectomized obese mice, R141
- hydrogen homeostasis and osmolality, during sodium chloride and water intake, R97

insulin secretion, substrate homeostasis and, R1035

physiological changes, during urethan anesthesia, R73

Terbutaline, adrenergic-histaminergic interactions, neural, hindpaw, H426

Testes

- plasma membrane, hormone effects, E442
- thyroid, circadian period and (hamster), R1

Testosterone

- body size and composition and, adult (monkey), E857
- bone density and, during growth, E416
- LH response and, arachidonic acid and protein kinase C, E314

Tetraethylammonium

- organic cation transport, potential-driven (flounder), R492
- transport, renal tubules (snake), F167

Thalamus, posterior, neuronal activity during sleep (squirrel), R1008

Thallium, blood flow distribution determined by, intrarenal, H1535

Theophylline

- decreased secretion, aging and, colon, G72
- excretion, during leg exercise, H15
- glucose inhibition of insulin release, E422

Thermal adaptation, time course of, plasma membrane, kidney (trout), R622, R628

Thermal injury

- negative interstitial fluid pressure and, H1069
- splanchnic leucine extraction effects, protein kinetics, R303

Thermogenesis

- brown fat
- CRF effects, E255
- nuclear T₃ receptors, E496
- cold and diet effects, skeletal muscle, E180
- GDP binding, brown fat, E865
- glucose-induced, thyroid hormones and, E146
- lateral hypothalamic lesions, E708
- norepinephrine turnover, iron deficiency, R90
- oxygen consumption and, forearm, E572
- trophic changes in brown fat, neural influences, R874

Thermogenic agents, insulin receptors and, obesity, E101

Thermogenin, insulin receptors and, obesity, E101

Thermography, infrared, oscillating heat flow, pinna, R464

Thermoregulation

- behavioral, adrenoceptors and (goldfish), R600
- blood volume and, exercise-heat stress, R456
- brown fat composition, fasting-refeeding cycle effects, E120
- fever, changes during urethan anesthesia, R73
- oscillating heat flow, pinna, R464

Thiocyanate, glutathione efflux and, hepatocytes, G403

Thirst: *see* Drinking

Thoracic duct, albumin reabsorption kinetics, H375

Thrombin, histamine stimulation of, endothelial cells, C214

Thrombocytopenia, pulmonary hypertension and, H1165

Thromboxane, antagonism, cardioprotective actions in atherosclerosis, H318

Thromboxane A₂

- metabolites, excretion during leg exercise, H15
- phospholipase C activation by, mesangial cells, F1059
- pulmonary vascular response to PAF and, awake state (sheep), H434
- synergistic effects, coronary flow and myocardial function, H153

Thyroid

- circadian period and (hamster), R1
- status, white adipose tissue development and, E280

Thyroidectomy

- circadian period and (hamster), R1
- kinins and, E411

Thyroid hormones

- activation, cold exposure, brown fat, E496
- glucose metabolism and, E146
- iron deficiency and, environmental temperature effects, R90
- kinetics, three-compartmental analysis effects of D-propranolol, E80
- kinins and, E411
- plasma protein-mediated transport, E221
- sodium-potassium-ATPase, high-affinity isoform of, E912
- sodium-potassium transport and, skeletal muscle, E604
- status, white adipose tissue development and, E280
- transport
- impaired, obesity and, E54
- plasma protein-mediated, E403
- treatment, myocardial infarction, H801

Thyroparathyroidectomy

- exchangeable calcium and blood flow after, bone, H94
- phosphaturic action, foscarnet, F984

Thyrototoxicosis, glucose intolerance in, role of insulin, glucagon, and epinephrine, E843

Thyrotropin-releasing hormone, stimulation, prolactin release, C633

Thyroxine

- conversion to triiodothyronine, cold exposure and, brown fat, E496
- kinetics, three-compartmental analysis effects of D-propranolol, E80
- uptake, liver, E110

L-Thyroxine, treatment, myocardial infarction, H801

Thyroxine 5'-deiodinase, trophic changes in brown fat, cold acclimation, R874

Tibialis anterior muscle, metabolic and fiber size properties, C43

Tongue, spatial map of salts and saccharides, R117

Tracer techniques

- glucose kinetics, euglycemic clamp, E871
- substrates, model, E94

Trachea

- epithelial cells, differentiated properties, C760
- response to neurotensin, ventral medulla, R780

Transferrin, tissue, iron and, erythron, R326

SUBJECT INDEX TO VOLUME 255

Transforming growth factor, proteins, renal epithelial cells (monkey), F800
 Transplantation, skeletal muscle, vascularized grafts, blood flow in, H1043
 Transporters, amino acids, regulatory signals for, intestinal, G151
 Treadmill: *see* Exercise
 Trehalase, expression, after glucose starvation, kidney cells (pig), C816
 TRH: *see* Thyrotropin-releasing hormone
 Triacylglycerol
 orally fed, absorption and metabolism, G612
 secretion, flow rate and insulin effects, liver, E306
Trichinella spiralis, antigen preparation, jejunal smooth muscle contraction and, G701
 Trifluoperazine
 calcium transport and, basolateral membrane vesicles, small intestine, G482
 gastrin and somatostatin release, stomach, G627
 Trigeminal complex, spinal, microinjection of ANF, cardiovascular responses, R182
 Trigeminal resection, pial arteriolar responses, hypertension or norepinephrine, H1
 Trigeminal ganglia, trigeminal resection, pial artery responses and, H1
 Triglycerides, kinetics, carbohydrate feeding and, E236
 Triiodothyronine
 kinetics, three-compartmental analysis
 effects of D-propranolol, E80
 metabolism, exercise regulation of, E824
 Trimethylamines, accumulation, during dehydration, renal inner medulla, F626
 Triton WR-1339, renin granules, renal, E353
 Trypsin
 inactivation of lipase, G476
 protease effects on adenylate cyclase, F1033
 Trypsin inhibitor, repeated treatment, exocrine pancreatic treatment, G236
 Tubulin, nonrandom turnover, cardiac fibroblasts, C202
 Tubuloglomerular feedback: *see* Feedback
 Tumor necrosis factor
 interleukin 1 and, energy metabolism, E760
 recombinant human, hormonal and metabolic responses, E206
TxA₂: *see* Thromboxane A₂
 Tyrosine hydroxylase, activity, chronic sinoaortic denervation effects, R768
 Tyrosine kinase, activity, thermogenic agent effects, obesity, E101

U

Ulcer, gastroduodenal mucosa, paraventricular nucleus stimulation and, R861
 Ultrafiltration, muscle and skin, albumin flux and volume flow in, H458
 Unloading, skeletal, bone formation and, glucocorticoid effects, E875
 Uracil ribonucleotide, metabolism, glomerular cells, C712
 Urea
 basolateral chloride channels, peritubular hypertonicity effects, F1128
 excretion, vasopressin change effects, R940

flux, ureter, F244
 transport, skin (toad), F429
 Urecholine, intestinal motility, pancreatic secretion and, G498
 Urerter
 excision, inner medullary solute concentration and, F1225
 obstruction, renin-angiotensin system response to relief of, neonate (guinea pig), F1070
 urea flux, F244
 Uridine, plasma, glomerular synthesis, F647
 Uridine diphosphoglucose, metabolism, glomerular cells, C712
 Uridine phosphorylase, uracil nucleotide synthesis and, glomerular, F635
 Urinary bladder
 ADH action, indomethacin effects (toad), F74
 ADH-stimulated aggregate delivery (toad, frog), C641
 antidiuretic response, microtubular network and (frog), F1098
 apical membrane, responses to ADH, cotochalasin B inhibition of (toad), C526
 apical plasma membrane, antidiuretic hormone (toad), F375
 hydroosmotic effect of oxytocin, calcitonin inhibition (toad), E613
 passive sodium chloride transport, cellular pathway (flounder), F229
 release of GABA, regulation (guinea pig), R888
 sodium transport, stimulation by IGF1 (toad), C413
 Urinary concentrating mechanism, ureteral excision effects, renal medulla, F1225
 Urine
 concentration
 loop of Henle, countercurrent multiplier system (bird), F500
 papillary blood flow and, F690
 vasopressin change effects, R940
 excretion, ANH hormone effects, sodium depletion, R867
 flow
 ANF release, hypophysectomy, R534
 fetal and adult, vascular volume expansion and (sheep), R846
 inhibition of crystal absorption, F1197
 Ursodeoxycholate, hydroxylated, protoporphyrin excretion and, liver, G382
 Uterus
 smooth muscle, myosin phosphorylation and, C34
 sympathetic innervation, pregnancy (guinea pig), E272

V

Vagal afferents
 capsaicin-sensitive pathway, cholecystokinin inhibits gastric emptying, G242
 cardiovascular reflexes, G319
 Vagotomy
 cardiovascular reflexes, physiological enteric stimulation, G319
 gastroduodenal motility and (turkey), G1
 Vagus nerve
 cardiac baroreflex properties, differentiation, R654
 mechanoreceptors, CCK effects, G55
 parasympathetic denervation, supersensitivity of sinus node and AV node after, H534
 Valine, metabolism, regulation in kidney mitochondria, E475
 Valinomycin, stimulation of acid formation, permeable gastric glands, G313
 Vanadate, glutathione efflux and, hepatocytes, G403
 Variables, dummy, multiple linear regression, R353
 Vasa recta
 amino acid transport, juxtamedullary nephrons, F397
 solute concentration, ureteral excision effects, F1225
 Vascular bed, splanchnic, carotid sinus baroreceptor control of, H1305
 Vascular endothelial cells, insulin transport, intracellular pathways (calf), C459
 Vascular mechanics, intramural lymphostasis and, H1289
 Vascular reactivity
 abnormal, kinins and, H397
 monocrotaline pulmonary hypertension and, H1484
 Vascular recruitment, lung lymph flow, during increased blood flow, H1149
 Vascular responses
 endothelium-dependent, coronary artery constriction, H317
 renal hypertension, H693
 Vascular wall, composition, sodium content and vascular reactivity, H860
 Vascular waterfall, intramyocardial pressure, coronary flow and, model, H664
 Vasoactive drugs, cardiac baroreflex properties, differentiation, R654
 Vasoactive peptide, C3a, pulmonary artery responses, H1227
 Vasoconstriction
 adrenergic, coronary artery (calf), H1452
 α -adrenoreceptors and, finger skin, H1000
 coronary, vasopressin effects, H261
 hypoxic pulmonary, endothelial injury, H1484
 pial vessels, trigeminal resection effects, H1
 pulmonary
 intralipid effects, H1499
 stretch-induced, H1391
 renal, adenosine receptor-induced, mechanism of, H885
 Vasodepression, atrial natriuretic factor-induced, central nervous system, H616
 Vasodilation
 acetate and cAMP, vascular smooth muscle, H1378
 angiotensin II-induced, aorta (fowl), R591
 cerebral
 bioassay of endothelium-derived relaxing factor, H1259
 blockade from acetylcholine and nitric acid, H847
 endotoxemia effects, heart, H1295
 locally mediated, dehydration effects, hindlimb (baboon), H266
 maximal, changes in coronary pressure-flow relations, H476
 muscle, oxygen consumption, tension, and carbon dioxide tension relations, H1004

SUBJECT INDEX TO VOLUME 255

pial vessels, trigeminal resection effects, H1

pulmonary, combined neurohumoral block and, awake state, H1084

renal, sodium excretion during, renal artery pressure effects, F828

Vasodilator therapy, pulmonary hypertension and, model, H1232

Vasomotion, local vascular resistance and, effective diameter, H1240

Vasomotor mechanism, medullary, pressor responses from stimulations, R709

Vasopressin: *see also* Antidiuretic hormone

ACTH release and, CRF and angiotensin II effects, awake state, E46

action, histidine effects, bladder (toad), F685

adaptation to sodium delivery and, distal tubule and collecting duct adaptation to, F1256

adenylate cyclase sensitive to, lithium inhibition of, renal epithelial cells, F995

adrenal steroidogenesis and, R806

A6 epithelial response to, dexamethasone acceleration of, C661

aggregate delivery stimulated by, vesicular transport role in (toad, frog), C641

aldosterone and, central interactions on cardiovascular system, R166

ANP release, renal function and, E449

arginine

- cAMP levels dependent upon, cortical collecting tubules, F43
- circadian variation in response to, E265
- during dehydration, awake state, R46
- mesangial cell contractions, calcium and, F142

arterial pressure and, awake state, R693

autoregulation of cardiac output, hypertension, awake state, H44

calcium mobilization induced by, ANF effects, glomerular mesangial cells, F771

central, chronic sinoaortic denervation effects, R768

cerebral circulation and, H70

characteristics, papillary collecting duct cells, F1160

cold-enhanced pressor response, spontaneous hypertension, H1018

dehydration and rehydration, maternal (sheep), E674

direct cardiac effects, H261

diuresis, α_2 -adrenoceptor agonist-induced, F317

growth and, glomerular mesangial cells, F898

hydraulic conductivity and, cortical collecting tubules, F841

hypoxia, awake state (sheep), R274

infusion, intravenous, plasma ACTH concentration and, awake state, R665

intracellular calcium and sodium transport and, bladder cells (toad), F1015

intravenous α -dothelin effects, awake state, R1064

mean arterial blood pressure and, awake state, H483

molecular events in expression of, cognate receptors and, F207

natriuresis, atrial stretch and, R259

phosphoinositide hydrolysis stimulation, LLC-PK₁ cells, C502

plasma

- carotid sinus pressure and, H1199
- renal hypertension, H693
- plasma renin activity and, awake state, E793

postural release, ANP effects, R368

potassium depletion and, kidney, F1033

pulmonary vasodilation, combined neurohumoral block and, awake state, H1084

receptors: *see* Receptors

regional hemodynamic responses to adrenoreceptor antagonism and, awake state, H813

regulation of CRF secretion, E287

release, blood and CSF, hemorrhage effects, R731

renal response to, tonic inhibition by pertussis toxin substrate, F1107

secretion

- drinking and, during dehydration (pig), R249
- during estrous cycle, R1041
- sodium chloride permeability and, inner medullary collecting duct, F421
- subpicomolar changes, urinary concentration and, R940
- urine flow, vascular volume expansion and (sheep), R846
- vasoconstrictor effect of, blockade after hemorrhage, awake state, H1325

Vasopressin analogue, fluorescent, binding, collecting duct cells, C622

Vasoregulation, pulmonary, pentobarbital anesthesia after hypoperfusion, H569

Vasotocin, antidiuresis induced by, glomerular filtration changes during (kelp gull), R936

Velocimetry

- laser-Doppler, sympathetic tone and vascular resistance, H937
- rauwolscine, cold-induced vasoconstriction and, finger skin, H1000

Venomotor responses, central and local hypoxia, H760

Ventilation, cerebral response to, fetus in utero (sheep), R1049

Ventral medulla, responses to neurotensin, tracheal and phrenic, R780

Ventricles: *see* Cerebral ventricles; Heart ventricles

Ventricular cells, fast inward current, embryonic heart (chick), H540

Verapamil

- AVP-stimulated calcium efflux and, mesangial cells, F142
- gastrin and somatostatin release, stomach, G627
- myocardial responses, ruthenium red (frog), H1413
- PTH resistance and, duodenal calcium absorption, E702

Videomicroscopy, fluorescence, renal function, intrarenal adenosine effects, F1230

VIP: *see* Peptides, vasoactive intestinal

Vitamin D

- 1,25-dihydroxy-, hypoparathyroidism and pseudohypoparathyroidism, E730
- metabolism
- renal adaptation to phosphate deprivation, R373

verapamil effects, E702

Vitamin E, lipid peroxidation, metallothionein response to stress, E518

Voltage clamp analysis

- acetylcholine effects, AV node, H7
- calcium current and contractility, ventricular myocytes, H1173
- fast inward current, embryonic heart (chick), H540

Volume

- blood
- atrial distension; natriuresis and, R259
- regulation, α_1 -adrenoceptor mediation, F116
- thermoregulation and, exercise-heat stress, R456

cell

- hypotonic regulation, medullary thick ascending limb, F962
- ouabain-resistant potassium-rubidium fluxes, red blood cells (sheep), C331
- regulation without active transport, renal, F529
- regulatory decrease, cortical collecting tubules, C612
- regulatory response, erythrocytes (skate), R982
- water flow, proximal tubules (salamander), F188

expansion

- ANF during, hypothyroidism, R61
- ANF release, hypophysectomy, R534
- ANP and, additive and synergistic interactions, F66
- blood, ANF secretion and, F936
- intrarenal, sodium reabsorption and, proximal, F1178
- renal response to, awake state (monkey), R388
- saline loading, essential hypertension, F1085
- vascular, fetal and adult urine flow (sheep), R846

flow, albumin flux and, skin and muscles, H458

intracellular pH and, skin (frog), F126

left ventricular

- balloon method of measurement, H394
- overloaded heart, H1399

myocardial wall, changes in coronary pressure-flow relations, H476

plasma, adrenal gland changes during aging, E903

pulmonary intravascular, muscarinic regulation of, lung, H1219

regulation

- ANF and (fish), F1281
- hypotonic, anions in, proximal straight tube, F853

regulatory increase, sodium-hydrogen exchange and, control, renal cells (opossum), C76

stroke, real vs. Windkessel impedance, H742

venous, forearm, radionuclide plethysmography, H947

W

Water

- absorption
- bumetanide effects, intestine (flounder), C246
- proximal, F434

SUBJECT INDEX TO VOLUME 255

Water (*continued*)
balance, regulation of carbon dioxide ventilation and, R105
body, spontaneous hypertension, F953
deprivation
adrenergic control of renin in, awake state, E793
ANP or captopril effects, R737
rehydration and, glomerular ANF receptors during, F621
vasodilation and, hindlimb (baboon), H266
voluntary sodium intake and, R1025
excretion
atrial resection and, awake state, H144
renal, intrarenal adenosine effects, F1230
extracellular content, muscle glucose, E942
flow
osmotic, vasopressin effects, bladder (frog), F1098
proximal tubules (salamander), F188
intake
hydrogen homeostasis, osmolality, and body temperature during, R97
pregnancy and lactation effects, R1020
vasopressin and, during dehydration (pig), R249
measurement, infrared absorbance, R175
permeability: *see* Permeability

salt, adaptation to, kidney (trout), R418
transendothelial, albumin transfer and, C368
Water channels, albumin effects, endothelium, H638
Weight
body
fasting-refeeding cycle effects, brown fat, E120
loss, CRF effects on food intake, E255
material influences (vole), R831
melatonin and, adults (hamster), R812, R823
regulation, CSF glucose and insulin penetration, R200
Weightlessness
bone formation and skeletal unloading, glucocorticoid effects, E875
short spaceflight, bone changes after, R243
Wheat bran, colonic transit time and, radiographic analysis, G633
Work, preload recruitable, after acute myocardial ischemia, H85

X

Xanthine oxidase
endothelium-dependent relaxation and, diabetic aorta, H825

Y

granulocytes and, ischemia-reperfusion injury, H12C9
inhibition, allopurinol, H202
Xanthines, intracellular calcium and, cortical collecting tubule cells, C581

Z

Zinc, tumor necrosis factor, metabolic effects, E206
Zollinger-Ellison syndrome, gastrin secretion, gastrinoma cells, G596
Zona fasciculata, cells, corticosterone in, obesity effects, E229
Zona glomerulosa, cells, corticosterone in, obesity effects, E229
Zymogen granules, potassium transport, pancreas and parotid gland, C705

Author Index to Volume 255

Abas, N., H272
Abbott, W. G. H., E332
Abboud, H. E., F674, F1059
Abe, Y., E129, E437
Abildgaard, U., H1535
Aboolian, A., F486
Abufal, A., F429
Accavitti, M. A., C835
Acevedo, C., C408
Acheson, K. J., E146
Achs, M. J., E189, E201
Adams, E. M., H261
Adams, J. M., H295
Adams, T., G772
Adelberg, E. A., C495
Adler, G., G236
Adler, S., F781
Adrogué, H. J., E812
Agarwal, J. B., H301
Agarwal, N., C495
Agronoff, B. W., G99
Aguirre, M., H801
Agus, Z. S., C385
Ahearn, G. A., R648
Ahluwalia, M., C552
Ahmad, S., G352, G462
Ahokas, R. A., R748
Ahrén, B., E579, E785
Aithal, H. N., F868
Akaike, N., H410, H754
Aki, Y., E437
Albers, J. J., E894
Alcock, N., E206
Alessio, H. M., C874
Alexander, E. A., F307, F1155
Alexander, J., Jr., H679, H742
Alexander, N., R768
Alexandre, C., R243
Alfoldi, P., R310
Alford, F. P., E668
Alhenc-Gelas, F., E411
Allen, A. M., H1011
Allen, D. P., F115
Allen, I. S., C51
Allen, M. L., F704
Allen, S. J., H492
Allescher, H.-D., G352, G441, G462
Allessie, M. A., H1359
Al-Mahrouq, H. A., F15
Almon, R. R., E850
Alonso, G., E463
Alpern, R. J., F807
Alpert, N. R., H325
Altschuld, R. A., C162
Alvarez, L. J., C595
Alvinerie, M., E688
Alvo, M., F74
Amatruada, J. M., E173
Ammons, W. S., R994
Amore, B., H885
Amoss, M. S., C447
Amoss, M. S., Jr., E59, E469
Amtorp, O., H1535
Amundsen, S. M., H879
Anagnostopoulos, T., F158
Anaya, T., H1227
Anderas, P. R., H144
Anderson, F. L., H601
Anderson, J. C., R616
Anderson, J. W., R97, R105
Anderson, R. J., F841
Anderson, T. E., E332
Andreani, D., F121, 4
Andreoli, T. E., F1128, F1138, F1145
Angielski, S., R557
Anwer, M. A., G713
Aperia, A., F552, F666
Appia, F., G319
Appleyard, R. F., H1405
Arase, K., E255, R284, R974
Ardell, J. L., H1050, H1130
Arend, L. J., C581
Arfors, K.-E., H629
Argenio, R. A., G62
Arkinstall, S. J., E272
Armario, A., E518
Armour, J. A., H789
Armstead, W. M., H401
Armstrong, R. B., H1509
Armstrong, S. M., R237
Armstrong, W. M., C408
Arner, P., E737
Arnold, J., R226
Arogyasami, J., R38
Artal, R., E33
Artman, M., H335
Ashraf, M., H160
Askenase, A. D., H301
Asseenmacher, I., E463
Astrup, A., E572
Atherton, L. J., F349, F361
Atkinson, D. E., F807
Atkinson, M. M., C674
Au, G. H., E260
Aubert, J. F., H245
Audhya, T., E829
Autefage, A., E688
Avioli, L. V., E9, E660
Avison, M. J., F1170
Aviv, A., C573
Aw, T. Y., G403
Azhari, S., E903
Baba, M., F151
Baba, S., E652
Bacon, C. R., C519
Bacon, R. A., F15
Baertschi, A. J., H295
Baerwolff, M., R940
Bagby, G. J., E629
Baker, C. H., H426
Bakulin, A. V., R243
Balaban, R. S., C181, H185, H189, F581
Baldwin, B. A., R248
Ballatori, N., G253
Ballermann, B. J., F324, F666, F1091
Balschi, J. A., F626
Bando, T., R527
Banks, R. O., F907
Banner, C., E397
Barajas, L., F340
Baranowski, R. L., F1281
Barasoain, I., R839
Bárcenas-Ruiz, L., C479
Baresi, L. A., E153
Barfuss, D. W., F177
Barman, S. A., H1130
Barnhart, R. L., G745
Baron, A. D., E769
Baron, C., H1476
Barrett, P. Q., F1078
Barry, J. A., G206
Bartness, T. J., R812, R823
Bass, A. S., F494
Bassenge, E., H765
Bassett, A. L., H1254
Bassotti, G., G660
Bastl, C. P., F1235
Bates, P. C., E166
Baumann, T., E411
Beard, J., R90
Bechtel, P. J., E513
Becker, E. L., C589
Bégin-Heick, N., E833
Beglanger, C., G7
Beierwaltes, W. H., F408
Belanger, S. F., H1545
Bell, C., F1191
Bell, C. L., C102
Bell, J. E., C419
Bell, L., H1219
Bell, M. E., R344
Ben-Ari, E. T., E70
Bengele, H. H., F307, F1155
Bengtsson-Olivcrona, G., E247
Benjamin, B. A., R388
Bennegård, K., H1156
Bennett, T., R737, H813
Bennett, W. M., F265
Benoit, J. N., G542
Benos, D. J., C419, C835
Benthem, L., R547
Benyajati, S., R52
Berczi, V., H860, H1289
Berenson, M. M., G382
Beretz, A., H1276
Berezin, I., G441
Berg, J. A., F466
Berger, E., F728
Bergman, R. N., E680
Bergmann, J. E., F1003
Bergsten, P., E422
Berkofsky, J., R42
Berndt, T. J., F96
Berne, R. M., H1211
Berner, M. E., H1336
Bernstein, I. L., R424
Best, J. D., E668
Beuchat, C. A., R760
Biber, B., H691
Biber, J., C155
Biber, T. U. L., F922, F930
Bie, P., R149, R259, R940
Bieger, D., H789
Bier, D. M., E366
Biggers, J. D., C419
Bikle, D. D., E875
Binder, H. J., G329
Birch, F. M., F1281
Birnbaumer, L., H722
Bishop, V. S., H974, R693
Bistrian, B. R., R303
Black, M. A., E833
Blackburn, G. L., R303
Blackmon, J. R., H760
Blair, M. L., E793
Blair-West, J. R., R205
Blaise, G., H1032
Blakemore, L. J., R665
Bland, R. D., H1336
Blass, E. M., R901
Blatteis, C. M., R748
Blazer-Yost, B. L., C413
Blizzard, R. M., E559
Bloch, C. A., E87
Bloch, K. D., E383
Bloch, R., C822
Blot-Chabaud, M., F605
Blum, H., C377
Blumenfeld, J. D., F626
Bode, H. H., E213
Bodine-Fowler, S., C43, C684
Boechat, M. I., E416
Boepple, P. A., E559
Bogardus, C., E332, E942
Boineau, J. P., H503
Bolinder, J., E737
Boluyt, M. O., H659
Bonfils, S., G596
Boni, C., E946, E953
Bonjour, J.-P., F957
Bonke, F. I. M., H1359
Bonna, R., R128
Bonting, S. L., R677
Bonvalet, J. P., F605
Borbély, A. A., R27
Borer, K. T., R128, R718
Borgdorff, P., H280
Borgström, P., H629
Boron, W. F., C844, C857
Borras, M., E518
Borrell, J., R839
Bosia, A., C559
Boston, R. C., E668
Boucher, R. C., C237
Bouder, T. G., R968
Bouhnik, J., E411
Boulpaep, E. L., F188
Bourguet, J., C641, F1098
Bourke, E., F807
Boutilier, R. G., R395
Bouyssou, T., G12
Bovbjerg, D., E824
Boveris, A., C123
Boyarsky, G., C844, C857
Boyce, V. L., E332
Boyer, T. D., G547
Braaten, B., G72
Brace, R. A., R846
Bradham, D. M., F800
Bradley, M. E., G367
Braillon, A., G191, G194
Brand, P. H., H483
Brandi, L., E946
Braquet, P., C559
Braun, E. J., R760, F500
Bray, G. A., E255, R284, R507, R974
Brechtel, G., E769
Brennan, M. F., E206
Brennan, S., F301
Brenner, B. M., F324, F666, F1091
Brenner, R. M., F626
Breslau, N. A., E730
Breslow, M. J., H177
Brick-Ghannam, C., F43
Briggs, J. P., R449
Brindley, G. W., H94
Bringhurst, F. R., E886
Bristow, M. R., H601
Britton, K. T., R744
Britton, S. L., H44, H483
Brizzee, B. L., R46

AUTHOR INDEX TO VOLUME 255

Broadbent, P., E166
 Brock, T. A., C667, H1549
 Brody, M. J., G191, G194, R166
 Broki, O. H., F167
 Bronk, J. T., H94
 Bronner, F., F558
 Brooks, D. P., R1041
 Brooks, S. P. J., R289
 Brooks, V. L., R665
 Brown, A. M., H722
 Brown, G. E., E16
 Brown, G. S., R699
 Brown, J., G40
 Brown, M., R744
 Brown, P., E28
 Brownsey, R. W., R699
 Brugnara, C., C346
 Brunner, H., H36, H245
 Brunner, H. R., F1085
 Brunner, M. J., H1244, H1305
 Bruzzone, R., G33, C699
 Bryan, R. M., Jr., R295
 Buchan, A., G40
 Buchweitz-Milton, E., H623
 Buckley, D. J., H60
 Buehn, M. J., H514
 Buenaflor, G., E28
 Bueno, L., G158
 Bugelski, P. F., H1060
 Bulanski, E., R268
 Bülow, J., E572
 Bunnell, N. W., G676
 Buret, A., G201
 Burg, M. B., F57, C181
 Burger, A. G., E146
 Burini, R., E760
 Burke, J. F., E322, E760
 Burkhoff, D., H679, H742, H1263
 Burnatowska-Hledin, M., F704
 Burnatowska-Hledin, M. A., C581
 Burnett, J. C., Jr., R61
 Burt, D. W., F563
 Burton, H. W., H1043
 Buse, M. G., E159
 Busija, D. W., H343, H401
 Buss, W. C., F265
 Busse, R., H965
 Bussjaeger, L. J., G813
 Bussolino, F., C559
 Butler, J. P., R350, E696
 Buzby, G. P., C377
 Buzzigoli, G., E946, E953
 Bylund-Fellenius, A.-C., H1156

Cady, A. B., R310, R748
 Cain, S. M., H77
 Calaresu, F. R., R182
 Calvano, S., E206
 Cameron, J. S., H1254
 Campbell, K. B., H1405
 Campbell, W. B., C214, F474
 Campmany, L., E518
 Camussi, G., C559
 Canavan, T. E., H503
 Candau, M., G12
 Candia, O. A., C595, C724
 Cane, P., E680
 Cannon, W. J., H1050
 Cantiello, H. F., F574
 Cantin, M., F621
 Cantley, L., C531
 Caramelo, C., F771
 Caravella, S. J., G556

Cardinal, R., H1342
 Carey, R. M., F545, F749
 Carlisle, H. J., R787
 Carlson, M. E., E416
 Carmichael, F. J., G417
 Carretero, O. A., F408, F690
 Carrier, G. O., H1036
 Carroll, K. M., G339
 Carroll, M. A., F151
 Carter-Su, C., E723
 Cartledge, J. T., H375
 Carvounis, C. P., F685
 Casale, J., C603
 Cassano, G., R648
 Cassidy, S. S., H197
 Cassone, V. M., R332
 Castell, D. O., G767, G794
 Castell, J. A., G794
 Castellino, P., F444
 Castro, R., E674
 Caudill, A., G566
 Cavalieri, R. R., E110, E221
 Caverzasio, J., F957
 Cazenave, J.-P., H1276
 Cerbai, E., H872
 Cernacek, P., R929
 Chabardès, D., F43
 Chae, S. W., C798
 Chai, C. Y., R709
 Chaimovitz, C., F429
 Chajek-Shaul, T., E247
 Challiss, R. A. J., E41
 Chambert, G., R908
 Chami-Khazraji, S., F250
 Chan, C. B., G424
 Chance, B., C377
 Chang, D., E46
 Chang, E. B., G339
 Chang, S.-W., H691
 Chang, T.-M., G535
 Chanson, M., C699
 Chap, Z., E812
 Chapler, C. K., H77
 Chaplin, S. B., G1
 Chappard, D., R243
 Charash, W. E., H1421
 Charney, A. N., G247, G696
 Chase, H. S., Jr., F1015
 Chen, B. B., H569, H1084
 Chen, E., F574
 Chen, K. C., C291
 Chen, M., E839
 Chen, P.-S., H891, H902
 Chen, Y.-H., E793
 Cheng, M., C291
 Chenoweth, D. E., H1227
 Cherniack, N. S., R780
 Cherrington, A. D., E428
 Cheung, C. Y., R846
 Chevalier, R. L., F1070
 Chey, W. Y., G535
 Chi, M. M.-Y., C543
 Chiba, T., G99
 Chick, T. W., H1227
 Childs, M. E., H261
 Chiles, T. C., C340
 Chilian, W. M., H1558
 Chinard, F. P., C311
 Chobanian, M. C., F847
 Chou, C. C., G168
 Chow, E., C653
 Christensen, N. J., E572, R149
 Christin, L., E332
 Chu, T.-C., C724
 Churchill, P., H885

Cieslinski, D. A., F874
 Cimini, C. M., H1384
 Ciriello, J., R882
 Carlson, M. M., F126
 Civitelli, R., E9, E660
 Clandinin, M. T., E442
 Clark, D. A., G556
 Clarke, G. D., G55
 Clausen, T., E604
 Claybaugh, J. R., R274
 Clayman, P., F995
 Cleary, M. P., E1
 Clerc, N., G759
 Clerc, P., G113
 Clifton, G. G., R46
 Clougherty, P. W., H569, H1084
 Coady, M. J., C870
 Coburn, R. F., H1476
 Cochinea, C., F66
 Codina, J., H722
 Coe, F. L., F1197
 Cogan, M. G., F434, F1220
 Cohen, J. J., F237
 Cohen, M. V., H834
 Cohen, S., G787
 Coleridge, H. M., R6
 Coleridge, J. C. G., R6
 Collins, S. M., R21, G701
 Compton, A. M., R737
 Condon, R. E., G409, G566
 Cone, C. M., E375
 Conn, C. A., R128
 Conover, K. L., R21
 Conte-Devolo, B., E463
 Conti, F. G., F1214
 Coogan, C., C12
 Cooney, R. A., C226
 Cooper, K. E., R73, H947
 Corbett, S. W., E708
 Corman, B., F250
 Cortes, P., C712, F635, F647
 Corvol, P., E411
 Costa, L. E., C123
 Coulaud, H., R82
 Courneya, C. A., H1199
 Courtney, K. R., H1554
 Covert, R. R., H419
 Cowley, A. W., Jr., H144
 Cox, J. L., H503
 Cox, M., C413
 Cox, R. H., R431
 Coy, D. H., G535
 Cragoe, E. J., Jr., C495, F126, F930
 Crawford, J. D., E559
 Crawford, J. M., G121
 Crawhall, J. C., R929
 Crawshaw, L. I., R600
 Crigler, J. F., Jr., E559
 Crocker, R. M., H1525
 Crofton, J. T., R1041
 Crowell, R. E., H1227
 Crowley, W. F., Jr., E559, E696
 Cser, H. F., R338
 Cuatrecasas, P., C1
 Cunningham, J. J., E213
 Curran-Everett, D. C., R274
 Cushley, P., F685
 Cutaia, M. V., H329
 Cutler, C. L., E374
 Cutler, R. G., C874
 Cybulsky, M. I., H1549

Dabney, J. M., H514
 Dallman, M. F., E241

Dalton, C. B., G794
 Dampney, R. A. L., H1011
 Daniel, E. E., G352, G441, G462
 Danieley, N. D., H891, H902
 Dannies, P. S., C633
 Danthuluri, N. R., H1549
 Dantzler, W. H., R52, F167, F397

Darcy-Vrillon, B., G361
 Darmaun, D., E366
 Daugaard, G., H1535
 Daugirdas, J. T., H1378
 Davenport, W. D., E229
 Davidson, J. M., H1018
 Davidson, K. K., F656
 Davidson, P. A., G800
 Davies, N. W., H960
 Davies, P. F., C667
 Davis, B., C789
 Davis, D. L., H426
 Davis, F. C., R439
 Davis, J. W., H85
 Davis, M. J., H1114, H1558
 Davison, J. S., G55
 Dawson, T. L., C315
 Day, F. P., H937
 Deal, E. C., Jr., R780
 Debas, H. T., G676
 Decker, M. L., C19
 Decker, R. S., C19, C202
 Deen, W. M., F349
 Deen W. M., F361
 DeFrondo, R. A., F444
 Del Chiaro, D., E946, E953
 Delivoria-Papadopoulos, M., H563
 Delp, M. D., H1509
 DeMaison, L., H169
 DeMichele, S. J., R303
 Demigne, C., R539
 Denef, C., R407
 De Nicolao, G., E775
 Dennis, P. A., C667
 Dennis, R. C., R456
 Dent, J., G352, G490
 Denton, D., R205, R1020, R1025
 DePasquale, M., R338
 Desautels, M., E120
 Deschepper, C. F., E388, R6
 Deshaies, Y., R226
 DeSouza, L. R., G7
 Dhalla, N. S., E347, H1413
 Diamant, S. C., G505
 Diamond, J., G143, G151
 DiCarlo, S. E., H974
 DiCorleto, P. E., F674
 DiDomenico, J., C705
 Diehl, T. S., C667
 Dietz, J. R., R534
 DiGirolamo, M., E716
 Dillingham, M. A., F841
 DiMagno, E. P., G476
 Dimaline, R., G685
 Dinarello, C. A., E760
 Ding, G., C641
 Dissing, S., C508
 Dixon, E. G., H891, H902
 Dobbins, D. E., H514
 Dobson, G. P., R513
 Dockray, G. J., G685
 Docter, R., E80
 Dodds, W. J., G409, G619
 Dole, W. P., H1317
 Donnelly, W. H., H153
 Donowitz, M., G72

AUTHOR INDEX TO VOLUME 255

Donta, T. S., H1349
 Dooley, C. P., G93
 Dorveaux, L. D., H1247
 Dorward, P. K., R654
 Dostal, D. E., H272
 Dousta, T. P., F292, F984
 Downey, J. M., H834
 Drake, R. E., H492
 Drenckhahn, D., C368
 Drewnowska, K., F922, F930
 Drummond, W. H., H419
 Dubois, A., G767
 Dubois, D. C., E850
 Dubuc, P. U., R787
 Dubyak, G. R., C771, F1059
 Ducas, J., H19
 Dudeck-Collart, K. L., C340
 Dudley, M. A., F1138
 Duet, M., G596
 Duke, G. E., G1
 Duling, B. R., H236
 Dulloo, A. G., E180
 Dulos, R. A., E120
 Duncan, F., C712, F635, F647
 Duncan, R. L., F736
 Dunn, M. J., C771, F1059
 Dunning, B. E., E785
 Dysko, R. C., H1043
 Dzau, V. J., F563

Ebert, T. J., H685
 Ebisuno, S., R724
 Eckardt, A., H651
 Edelman, I. S., C251
 Edelman, S. V., E769
 Edens, N. K., R123
 Edgerton, V. R., C43, C684
 Edwards, B. S., R61
 Edwards, P. R., E403
 Edwards, R. M., F317
 Egan, J. W., H1060
 Ebring, R., H651
 Egnor, R. W., G696
 Ehrhart, I. C., H1096
 Ehrlich, Y. H., H651
 Ekenvall, L., H1000
 Ekins, R. P., E403
 Elander, A., H1156
 Eldred, E., C43
 Elger, B., R418
 Eliasson, A., E737
 Ellingsen, Ø., H228
 Elliott, S. J., F1214
 Ellis, E. F., H397
 Ellis, S. T., G292
 Ellis, V., H885
 Elouer-Blanc, L., G596
 Elz, J. S., H60
 Elzinga, G., H1263
 Endou, H., F977, F1122
 Endsley, J., R748
 Eng, C., F581
 Eng, M., R326
 Engbretson, B. G., F1276
 Entman, M., E812
 Epstein, A. N., R908
 Epstein, F. H., R212
 Erasmus, T., R936
 Erecinska, M., H1295
 Erickson, R. H., G212
 Erlil, D., C357
 Ernst, P. B., G701
 Ervin, M. G., E674
 Eskin, S. G., H219
 Espinoza, A. M., F74

Esser, K. A., H659
 Esteve, J.-P., G113
 Estrela, J. M., E801
 Etheredge, S. B., F270
 Etzell, B.-M., H1000
 Evans, J. N., H1391
 Even, P., R82
 Evered, J., E680
 Everts, M. E., E604
 Ewart, W. R., G319

Faber, J. E., H121
 Fahrenkrug, J., R149
 Falasco, J., R113
 Fallet, R., F1107
 Fändriks, L., G709
 Faraci, F. M., H70, H879
 Fargeas, M. J., G158
 Farman, N., F605
 Fatigati, V., C452
 Faulkner, J. A., H1043
 Fehr, D. M., H569
 Feigl, E. O., H1545
 Fein, F. S., E636
 Fekete, J., F513
 Felder, R. A., F970
 Felder, R. B., H1349
 Feldman, H. A., R350
 Feldman, M., G470, G723
 Fenley, M. P., H1399
 Feng, Z.-C., R478, R485
 Ferguson, A. G., C202
 Ferguson, A. V., R855, R861
 Ferguson, J. L., H1106
 Ferguson, T., F936
 Fernandez, V., F74
 Fernandez-Checa, J. C., G403
 Ferrannini, E., E946, E953
 Ferraris, R. P., G143, G151
 Ferrier, G. R., H992
 Fichtner, H., H965
 Field, J. B., E812
 Filicori, M., E696
 Fimmel, C. J., G221, G229
 Finch, C. A., R326
 Fine, B., C573
 Fink, A. S., G7
 Finn, S. E., G807
 Fioramonti, J., G158
 Firth, J. D., F391
 Fischman, A. J., E265
 Fiscus, R. R., H1378
 Fisher, D. A., E28
 Fisher, D. E., E743
 Fisher, K., C822
 Fisher, R. S., 529
 Fisher, S. K., G99
 Fisler, J. S., R284, R974
 Fitz, J. G., G547, G822
 Fitzgerald, G. A., H15
 Fitzsimons, J. T., R217
 Fleischman, L. F., C531
 Fleishman, K. E., C315
 Flitsch, T. J., E857
 Flouret, G., C822
 Flückiger, J. P., H245
 Fondacaro, J. D., G175
 Forbes, D., G201
 Forgo, J., C155
 Formaker, B. K., R1002
 Forsling, M. L., R248
 Forsell, H., G752
 Forte, L. R., F1040
 Foskett, J. K., C566
 Fossel, E. T., H855

Fowelin, J., E218
 Fox, J., E702
 Fox, J. E. T., G352
 Frank, J. S., H467
 Franki, N., C641
 Franklin, A. E., H1305
 Franklin, W. A., F868
 Fraser, R., R635
 Fredberg, J. J., R350
 Freeman, H. J., G292
 Freeman, R. H., F1040
 Freymond, D., E332
 Freyschuss, U., H1443
 Fried, M., G7
 Fried, T. A., F313
 Friedlander, G., F22
 Friedman, M. I., R123
 Frizzell, R. A., C835
 Fry, B., F861
 Fujii, A. M., H1525
 Fujii, Y., F466
 Fukuda, A., R134
 Fukuda, Y., F552
 Fukui, K., E129, E437
 Fuller, L. M., R217
 Fuller, S. J., E537
 Funai, J. T., H1136
 Funanage, V. L., C519
 Furler, S. M., E806
 Furuta, T., H288
 Futaki, S., H807

Gaa, S. T., C51
 Gabel, J. C., H492
 Gaburri, M., G660
 Gagliardi, M., H789
 Galbo, H., R400, E456
 Gall, D. G., G201, G505
 Gall, S. A. Jr., H1399
 Gallagher, K. P., H1043
 Galligan, J. J., G603
 Gamble, W. J., H1391
 Gamelin, L. M., F450
 Ganapathy, V., G85, F177
 Ganey, P. E., H165
 Ganguly, P. K., E347
 Ganz, M. B., C844, C857, F898
 Gapstur, S. M., F292
 Garcia, R., F621
 Gardiner, P. F., C731
 Gardiner, S. M., H813, R737
 Gardner, D. G., E388, R6, F1220
 Gardner, J. D., G106, G512
 Garella, S., F237
 Garfinkel, D., E189, E201
 Garg, L. C., C502
 Gargus, J. J., C12, F1047
 Garretson, L. T., R583
 Garrick, R. A., C311
 Garrison, J. C., E70
 Garvey, J. S., E518
 Garvin, J. L., F57, F711, R117
 Gasser, K. W., C705
 Gattone, V. H., II, F911
 Gauquelin, G., F621
 Gay, R. G., H801
 Gaynor, J. W., H1399
 Geer, P. G., R259
 Geis, G. S., R703
 Gelfand, J. A., E760
 Gellai, M., F317
 Geller, H. S., H1084
 Gelpi, R. J., H1525
 Gennari, F. J., F349, F361
 Gennser, G. A., R677

Gerberberger, R., R575
 Gewirtz, H., H664
 Ghishan, F. K., G482
 Gibbens, D. T., E416
 Gibbs, C. L., C536
 Gibbs, J., R113
 Gick, G. G., C251
 Giebisch, G., F108, F699, F1170
 Gil, F., E801
 Gilányi, M., F513
 Gilbert, D. N., F265
 Gilsanz, V., E416
 Gimotty, P. A., H419
 Gingold, M., F605
 Giocondi, M.-C., F22
 Giordano, C., F444
 Giorgi, C., H1342
 Girling, L., H19
 Giuntini, C., H375
 Glantz, S. A., R353
 Glaubensklee, C., C789
 Gleason, C. A., R1049
 Gleeson, T. T., R470
 Glotzbach, S. F., R1008
 Glower, D. D., H85
 Gluck, S. L., F868
 Go, L. O., H1188
 Goering, J. L., R563, F944
 Goetz, K. L., R259
 Göke, B., G236
 Golchini, K., F135
 Goldberg, H., F995
 Goldberg, L. I., F494
 Goldfarb, A. H., C874
 Goldman, B. D., R812, R823
 Goldman, S., H690, H801
 Goldstein, L., R982
 Goldstein, R. E., E428
 Goll, H. M., H569, H1084
 Gollan, J. L., G121
 Gomez, R. A., F1070
 Gomez-Cambronero, J., C589
 Gong, G., F1107
 Gong, Q. Y., C798
 Gonzalez, O., E416
 Gonzalez, R. R., R456
 Good, D. W., F78
 Goodyer, P. R., F1191
 Gores, G. J., C315
 Gorksi, J. P., H101
 Gotez, K. L., R1064
 Goto, K., H970
 Goto, Y., H366, H394
 Gotoh, M., E920
 Goy, R. W., E857
 Goyal, R. K., G587
 Gradmann, D., R677
 Graf, M., E265
 Graham, R. M., H1452
 Graham, S., H801
 Gramse, M., H651
 Granger, D. N., G162, G542, G690, H202, H1269
 Granger, H. J., H554
 Granger, J. P., F828, F1178
 Grassi de Gende, A. O., H587
 Gray, D. A., R936
 Green, T., G635
 Greene, A. S., H1244, H1305
 Grekin, R. J., R449
 Gréneau, T., E101
 Grider, J. R., G647
 Griendling, K. K., C667
 Grill, H. J., R424
 Grimbert, F. A., H1149

AUTHOR INDEX TO VOLUME 255

Grisham, M. B., H202
 Griswold, D. E., H1060
 Grodin, M., E28
 Grogan, W. M., F736
 Grosenbaugh, D. A., C447
 Gross, G. J., H825
 Grotendorst, G. R., F800
 Grotjohann, L. W., F911
 Grover, A. K., C297
 Gruenstein, E., C112, C552
 Guan, D., G212
 Guardabasso, V., E775
 Guaza, C., R839
 Guérin, M., C192
 Guerreiro, D., C754
 Guillaume, V., E463
 Gullans, S. R., F626, F666, F1170
 Gunning, M. E., F324
 Gunter, K. K., C304
 Gunter, T. E., C304
 Gunter-Smith, P. J., C808
 Gunther, C., G382
 Guo, Y.-S., G627
 Gupta, M. P., H1413
 Gurd, W., R373
 Gustafson-Sgro, M., H458
 Guth, P. H., G731
 Gutkind, J. S., H646
 Gutkowska, J., R232
 Gutman, M. B., R882
 Gylfe, E., E422
 Györy, A. Z., F66
 Gyr, K., G7
 Gyring, J., H1535

Haas, J. A., F1178
 Haber, R. S., E912
 Habibi, H. R., R268
 Habuchi, Y., H7
 Hachiya, H. L., C459
 Haddad, J., C19
 Haddox, M. K., G304
 Hade, J. S., H1349
 Haeberle, J. R., C34
 Häggendal, J., G752
 Haggerty, J. G., C495
 Hai, C.-M., C86, C401
 Halban, P. A., C459
 Hall, J. E., F823, R894
 Hall, W. G., R191
 Halloran, B. P., E875
 Hamm, L. L., F301, F861
 Hammerman, M. R., F847
 Hammond, G. L., H1024
 Han, L. R., R174
 Hanau, D., H1276
 Handler, J. S., C661, F375
 Handlogten, M. E., C261
 Hansen, B. F., E621
 Hansen, C. P., G665
 Hansen, S. A., E621
 Hansford, R. G., H347
 Haramati, A., F287
 Harasawa, Y., H679
 Hardison, W. G. M., G454
 Hargrove, D. M., E629
 Harig, J. M., G206
 Harland, R. W., F1116
 Harman, J., R513
 Harper, A. E., E475
 Harrison, E. H., H441
 Harrison, J. M., R470
 Harrison-Bernard, L., R46
 Hartley, C., E812

Hartmann, H. A., H1173
 Hartzell, C. R., C519
 Harvey, S., R635, R643
 Hashimoto, K., R527
 Hashimoto, M., R527
 Haskell, J. F., E504
 Hasser, E. M., R693
 Hauger, R. L., R744
 Haun, S. E., H1144
 Haupert, G. T., Jr., F574
 Havre, P. A., H1024
 Haxhiu, M. A., R780
 Hayakawa, A., H288
 Hayashi, M., F220, F466, F1160
 Hays, R. M., C641, F429
 Hazel, J. R., R622, R628, R923
 Head, G. A., R654
 Heath, J. E., R464
 Hebert, S. C., F626, F962
 Heddie, R., G490
 Hedge, G. A., R968
 Heick, H. M. C., E833
 Heilig, C. W., F626
 Heinz-Erian, P., G512
 Heistad, D. D., H70, H879
 Heizer, W., G212
 Helfant, R. H., H301
 Heller, H. C., R178, R1008
 Hellman, B., E422
 Henderson, R. M., F699
 Hennemann, G., E80
 Henrich, W. L., F474
 Henrikson, C. K., G62
 Henriksson, J., C543
 Hentschel, H., R418
 Hering-Smith, K., F301, F861
 Herington, A. C., E293
 Herman, B., C315
 Herrera, E., E280
 Hersey, S. J., G313
 Hershberger, R., H601
 Hess, M. L., H138
 Hessz, T., C368
 Hester, R. L., H236
 Heusner, A. A., R350
 Heylings, J. R., G470
 Hidalgo, J., E518
 Higgs, N. B., G27
 Hilden, S. A., F885
 Hill, D. E., H1060
 Hill, D. L., R1002
 Hill, J. O., R616
 Hillegass, L. M., H1060
 Hillgartner, F. B., E54
 Hilsted, L., G665
 Himms-Hagen, J., R874
 Hinton, C. F., G18, G640
 Hinton, D. A., E299
 Hintz, C. S., C543
 Hirano, T., E236
 Hirata, Y., H405
 Hiromasa, S., H7
 Hirschberg, R., F755
 Hiruma, M., E642
 Hisa, H., E793
 Hishida, A., F415
 Hittinger, L., H1525
 Hjemdahl, P., H1443
 Hoang, H. D., G813
 Hochachka, P. W., R513, R699
 Hoerter, J. A., C192
 Hofman, W. F., H1096
 Hogan, W. J., G619
 Hoit, B. D., H1370
 Hökfelt, T., G46

Holland, S. D., F1033
 Hollywood, J. A., C95
 Holst, J. J., G46
 Holt, S. A., H397
 Holzbach, R. T., G745
 Homcy, C. J., H1452
 Homma, S., F292, F984
 Honda, N., F415
 Honda, T., H704
 Honeyman, T. W., C226, C694
 Hong, S.-K., R274
 Honmura, A., E920
 Hood, D. A., C271
 Hood, D. M., C447
 Hood, V. L., F479
 Hoo-Paris, R., R1035
 Hopfer, U., C705
 Hopkins, D. A., H789
 Hoppe, A., R557
 Hori, M., H250
 Hori, S., H213
 Hostettler, A. M., R1059
 Houghton, D. C., F265
 Houser, S. R., H1173, H1434
 Howard, B. V., E322
 Hruska, K. A., E9, E660
 Hsieh, L.-C., C19
 Hu, D. C. K., E260
 Huan, C. K., E680
 Huang, C.-K., C589
 Huang, A. H., H1545
 Huang, B. S., E839
 Huang, S.-L., F1220
 Hueber, P., F685
 Huebers, H. A., R326
 Huffman, L. J., R968
 Hughes, M. J., C214
 Hugon, J. S., F1098
 Huizinga, J. D., C653
 Humes, H. D., F874
 Humme, J., E674
 Humphreys, M. H., F270
 Hunnighake, G. W., C603
 Hunter, M., F699
 Hurst, N. L., R388
 Husted, R. F., F1160
 Hyman, P. E., G807
 Hymer, T. K., F1033

Ibarra, C., E613
 Ichihara, T., F614
 Ichimori, K., H213
 Ideker, R. E., H891, H902
 Iguchi, A., E920
 Iitake, K., E449, R731
 Iizuka, M., H1468
 Ikeda, T., C870, E843
 Ikemoto, F., E642
 Ikrényi, C., F513
 Ikrényi, K., F513
 Illebekk, A., H228
 Ilkiw, R., H1499
 Illsley, N. P., C789
 Imoto, Y., H722
 Inada, M., H405
 Inagami, T., F100
 Ingrassia, P. M., G247
 Innes, I. R., H1413
 Inoue, H., H26
 Inoue, M., E449, H250, R731
 Inouye, S.-I. T., R1055
 Insogna, K. L., F1078
 Intaglietta, M., H629
 Intragumtornchai, T., R326
 Iqbal, A., H1032

Iriki, M., R527
 Irwin, M., R744
 Isenberg, G., H872
 Ishibashi, K., F49
 Ishikawa, N., H288
 Ishikawa, T., H970
 Islam, S., H1378
 Imaizumi-Beigi, F., C251
 Isohashi, F., R724
 Israel, Y., G417
 Istfan, N., R303
 Ito, C., R134
 Itoh, Z., G619
 Ivy, J. L., E374
 Iwai, K., E23, H250
 Iwai, S., R888
 Iwakura, K., H250
 Iwao, H., E129, E437
 Izzo, J. L., Jr., E793
 Izzo, R. S., G738

Jackson, D. C., R338
 Jackson, E. K., H386
 Jackson, M. J., C95
 Jackson, W. F., H711
 Jackson-Burns, D. A., H1254
 Jahoor, F., E871
 Jaisser, F., F605
 Jalife, J., H895
 Jamison, R. L., F244, F257, F1225, F1230
 Janiak, P., R166
 Jansson, P.-A., E218
 Jasmin, B. J., C731
 Jeffries, W. B., F1107
 Jenkins, A. B., E806
 Jennings, D. B., R97, R105, R252
 Jennings, R. B., H1188
 Jensen, R. T., G106, G512
 Jepson, M. M., E166, E617
 Jequier, E., E146
 Jo, Y. H., G535
 Joffe, S., E33
 Johannsen, L., R310
 John-Alder, H. B., C271
 Johns, C. A., F885
 Johnson, A. R., C214
 Johnson, J. A., H272
 Johnson, L. R., G304
 Johnson, M. L., E749
 Johnson, P. C., E99, H131, G141, H217, R189, F205
 Johnson, R. L., Jr., H197
 Johnston, G. A., G292
 Jones, C. J., C102
 Jones, C. T., E272
 Jones, D. L., R882
 Jones, M. D., Jr., R1049
 Jongasma, H. J., H770
 Jönsson, C., G709
 Jose, P. A., F970
 Jourdan, M. L., R1035
 Joyner, K. M. S., R113
 Jublin-Dannfelt, A., H1443
 Juillerat, L., H36
 Jule, Y., G759
 Jury, J., G441

Kabas, J. S., H85
 Kabela, E., C479
 Kablitz, C., F1281
 Kachadorian, W. A., C526
 Kachra, Z., F1191
 Kageyama, M., F614

AUTHOR INDEX TO VOLUME 255

Kagiya, T., H250
 Kahn, T., F182, F763
 Kaispling, B., F1256, F1269
 Kaldunski, M. L., F690
 Kaleta, M., F626
 Kamada, T., H250
 Kamel, F., E314
 Kanaide, H., H410, H754
 Kaneko, T., R635, R643
 Kanwar, Y. S., F590
 Kao, H. W., G807
 Kaplowitz, N., G403
 Kapturczak, E., C502
 Kapusta, D. R., R379
 Karasov, W. H., R174
 Kargacin, M. E., C694
 Karl, H. W., E65
 Karlstad, M. D., R303
 Karmazyn, M., H608
 Kartha, S., F800, F868
 Kaseda, S., H534
 Kasinath, B. S., F590
 Kastin, A. J., E265
 Katz, A., C140, C145, E942
 Katz, A. I., F466
 Katz, A. L., E374
 Katz, L. A., H185, H189
 Katz, M. S., F1033
 Katz, S. A., H1545
 Katzeff, H. L., E824
 Kaufman, A., C357
 Kaufman, A. M., F182, F763
 Kaufman, L. N., E708
 Kawada, T., E23
 Kawai, C., H1311
 Kawamura, M., F100
 Kawazoe, S., F614
 Keesey, R. E., E708
 Keeton, D., C835
 Keil, L. C., E46, R665
 Keim, V., G236
 Kelleher, J. K., C95
 Keller, T. M., F278
 Keller, U., F479
 Keller-Wood, M., E241, R344
 Kelly, D. A., R774
 Kelly, P. J., H94, H101
 Kelly D., F66
 Kemnitz, J. W., E857
 Kempson, S. A., F15
 Khrabai, A. A., R756
 Kielb, M., R128
 Kikuchi, K., G482
 Kikuchi, T., G482
 Kilberg, M. S., C261, C340
 Kilduff, T. S., R178
 Kile, J. P., E59, E469
 Kilpatrick, L., H1295
 Kim, D. D., H1378
 Kim, H.-K., E597
 Kim, J. K., F142
 Kim, S., E129, E642
 Kim, S. H., E531
 Kim, Y. S., G212
 Kimmich, G. A., C468, C737
 Kimura, S., E437, H970, H1254
 Kimura, T., E449, R731
 King, G. L., C459
 Kinsella, J. L., F1183
 Kirchner, K. A., F1206
 Kirk, K. L., C622
 Kiron, M. A. R., H1542
 Kisslo, J. A., H1399
 Kitabatake, A., H250
 Kitakaze, M., H250
 Kitidas, P. A., H335
 Klee, G., R61
 Kleiman, R. B., H1173, H1434
 Klein, L. W., H301
 Klein, S., E871
 Kleinman, J. G., G206, F1025
 Klingbeil, C. K., E46
 Klöckner, U., H872
 Klugerman, A. H., R373
 Knepper, M. A., F57, F421
 Knigge, K. M., F868
 Knigge, U., G46
 Knight, D. R., H358, H525, H1452
 Knight, L. C., G529
 Knoblauch, C., C76
 Knox, F. G., R557, R756, F96, F984, F1178
 Kobayashi, R., G676
 Kobayashi, T., H434
 Koch, O. R., C123
 Koehler, R. C., H1516
 Koelbel, C. B., G779
 Kohlhardt, M., H965
 Koizumi, K., R961
 Kojima, I., C442
 Kojima, M., H540
 Komori, K., H207
 Komorowski, R. A., G619
 Konagaya, M., E397
 Konagaya, Y., E397
 Kone, B. C., F666, F1170
 Konishi, T., H1311
 Kontos, H. A., H1, H397, H847, H1259
 Konturek, P., G498
 Konturek, S. J., G498
 Koob, R., C368
 Kopple, J. D., F755
 Koretsky, A. P., H185
 Koretsune, Y., H250
 Kornecki, E., H651
 Korner, P. I., R654
 Korthuis, R. J., G542, G690
 Kostolanska, F., G352
 Kostnara, M., E903
 Kováč, A. G. B., F513
 Kowalchuk, J. M., E41
 Koyama, S., H434
 Kraeger, E. W., E806
 Kralios, A. C., H601
 Kramer, L. B., F736
 Kramer, R. E., E338
 Kramas, R., H476
 Krasney, J. A., R274
 Krause, W. J., F1040
 Kraut, J. A., F331
 Krenning, E. P., E80
 Krevsky, B., G529
 Krier, J., G772
 Krilowicz, B. L., R1008
 Krisanda, J. M., C393
 Krueger, J. M., R157, R310, R748, R914
 Kuan, C. J., H386
 Kubajak, C. L., E314
 Kubillus, S., C822
 Kubina, M., H1276
 Kulik, T. J., H1391
 Kumar, S., F1197
 Kuo, J. S., R709
 Kuo, L., H1558
 Kurihara, M., H646
 Kurokawa, K., C442, F834
 Kurosawa, M., E23
 Kurth, C. D., H563
 Kurtz, I., F135
 Kurzner, S., H53
 Kusama, S., H343
 Kushner, D. C., E559
 Kusunoki, K., H1311
 Kvietys, P. R., G162, G690
 Kwan, W. C., G292
 Kwan, W. W., G143, G151
 Laborde, N. P., E28
 Lacy, D. B., E428
 Ladenheim, E. E., R988
 Ladizesky, M., E613
 Laine, G. A., H492
 Lalonde, J., R226
 Lamb, N. E., F545, F749
 Lambert, R. W., G367
 Lammers, W. J. E. P., H1359
 Lamping, K. G., H1317
 Landaw, E. M., E403
 Landrey, S. R., R622, R628
 Landsberg, L., E180
 Lang, C. H., E629
 Lang, D. J., H131
 Langevin, P. B., H272
 Lanza, F., H1276
 Lapointe, M., R373
 Larivière, R., H693
 Larsen, B., H1535
 Larson, T., F1230
 Lasheras, C., C745
 Laskiewicz, J., G498
 Lattion, A. L., H245
 Latzka, W. A., R456
 Lauer, C., C192
 Lauf, P. K., C331
 Laurent, G. J., C754
 Laurent, S., H36
 Laurentie, M., E688
 Lavallée, M., H1330
 Lavoie, P.-A., C731
 Law, G. J., C633
 Law, W. R., H1106
 Lawler, J. E., R431
 Leach, J., H1227
 Leadley, R. J., Jr., R259, R1064
 Lechan, R., R212
 Ledingham, J. G. G., F391
 Ledsome, J. R., H1199
 Lee, A. D., C145
 Lee, C. C., C278, F787, C798
 Lee, E., G723
 Lee, E. H. Y., R709
 Lee, J., E839
 Lee, K. Y., G535
 Lee, N. P., C237
 Lee, R. W., H690
 Lee, R. Y., E213
 Lee, T. M., R831
 Leeman, E., E241
 Lees, M., G27
 Lefer, A. M., H318
 Leffler, C. W., H343, H401
 Le Grimellec, C., F22
 Lehman, S. L., E94
 Lehy, T., G596
 Leibach, F. H., G85, F177
 Leighton, B., E41
 Le Marchand-Brustel, Y., E101
 Lemasters, J. J., C315
 Lemieux, C., R42
 Lemieux, G., R42
 Lenz, H. J., G298
 Lesch, M., C19, C202
 Levens, N. R., G267
 Lever, J. E., C816
 Levin, E. R., H616
 Levin, N. W., F635, F647
 Levitsky, L. L., E743
 Levy, M., R929
 Lew, W. Y. W., H1370
 Lewin, M. J. M., G596
 LeWinter, M. M., H366, H394, H1370
 Lewis, E. J., F590
 Lewis, E. P., H1421
 Lewis, L. D., G818
 Lewis, M. A., H1421
 Li, Q., C162
 Liacos, J. A., G62
 Liang, J. P., G261
 Liard, J.-F., H1325
 Lichtstein, D., E383
 Liddle, R. A., G818
 Liedtke, C. M., C760
 Liedtke, A. J., H169
 Light, D. B., F278
 Lightman, S. L., R368
 Lillioja, S., E332
 Lin, A. M. Y., R709
 Lin, D., R616
 Lin, P., C112, C552
 Lin, R. H., R709
 Lin, S.-Y., F270
 Linas, S. L., F728, H1181
 Lindblad, L. E., H1000
 Linde, B., H1443
 Lindsey, B. G., H426
 Link, K., E559
 Linshaw, M. A., F853
 Lister, G., H53
 Litten, R. Z., H325
 Liu, A., E894
 Liu, E., G40
 Liu, F.-Y., F434, F1220
 Lively, K. M., E482
 Livermore, R. C., R923
 Lobocki, C. A., R718
 Loeb, J. N., E912
 Loghman-Adham, M., F984
 Logsdon, C., G113, G818
 London, G. M., H36
 Longenecker, G. L., H1075
 Longoni, S., C870
 Lönnroth, P., E218
 Lora-Vilchis, M. C., R908
 Lorente, P., H895
 Lorenz, R. R., H207
 Louie, D. S., G261
 Low, P. S., F115
 Low, R. B., H325
 Lowe, P. J., G454
 Lowry, O. H., C543
 Lucchesi, P. A., C226
 Lückhoff, A., H965
 Lukasiewicz, H., H651
 Lumbars, E. R., F11
 Lumsden, C. J., E357
 Lund, T., H1069
 Lundberg, J. M., G46
 Lundgren, F., H1156
 Lundholm, K., H1156
 Lundin, A., E737
 Lupton, J. R., G633
 Lutz, F., C368
 Lyall, V., C408
 Maccari, F., E946
 MacGregor, R. R., E299

AUTHOR INDEX TO VOLUME 255

Madara, J. L., G72
 Maddox, D. A., F349, F361
 Madias, N. E., F885
 Madsen, K. M., F115
 Madwed, J. B., R1064
 Maher, E., R929
 Maier, G. W., H1399
 Mailman, D., G162
 Majde, J. A., R748
 Makhlouf, G. M., G647
 Malaval, F., E463
 Malminson, T. J., H947, R73
 Mallet, R. T., C95
 Malmud, L. S., G529
 Malvin, R. L., E531, E839
 Mamo, J., E236
 Manaka, H., G462
 Manaka, Y., G462
 Mandel, G. S., F1025
 Mandel, N. S., F1025
 Mandla, S., F88
 Mangsen-Baker, C., C226
 Mannion, J., R439
 Mansfield, M. J., E559
 Manyari, D. E., H947
 Marcus, M. L., H866
 Marcus, P., R855, R861
 Marin, J. J. G., G382
 Mark, A. L., H496
 Mark, D. A., E824
 Marshall, J. J., H847, H1259
 Marsolais, M., R42
 Martin, D., H375, H1149
 Martin, I. K., E668
 Martin, L. F., F911
 Martin, T. J., F957
 Martin, T. P., C43, C684
 Martins, J. B., H577
 Marton, L. J., F270
 Marusic, E. T., F74
 Maruyama, K., H1499
 Masaki, T., H970
 Mashiba, H., E843
 Massaro, D., R521
 Massaro, G. D., R521
 Matlib, M. A., C323
 Matozaki, T., E652
 Matsubara, H., H405
 Matsui, K., R731
 Matsuki, T., H834
 Matsumoto, T., G409
 Matsumura, Y., F614
 Matsunaga, H., C442, E137, E920
 Matthews, D. E., E366
 Matthews, E. K., C433
 Maurer, A. H., G529
 Mautalen, C., E613
 Max, S. R., E397
 Mayer, E. A., G779
 Mayhan, W. G., H70, H879
 Mazzocca, N. J., H1173
 Mazzoni, M. C., H629
 McAllister, E. A., F474
 McAnulty, R. J., C754
 McBurnie, M., R1020, R1025
 McCafferty, G. P., G175
 McCull, R. B., R605
 McCann, F. V., F278
 McConnell, F. M., R982
 McCoy, L., R521
 McDonough, K. H., H699
 McD Tormey, J., H917, H929
 McGiff, J. C., F151
 McGowan, H. M., H717
 McHugh, P. R., R14, R1059
 McKinley, M. J., R205
 McKinney, T. D., F656, F1033
 McKittrick, D. J., R182
 McLaughlin, D. P., H937
 McMurry, I. F., H691
 McNamara, E. R., F307, F1155
 McNeill, H., G556
 McPherson, R. W., H1516
 Meacher, M. M., G633
 Meadows, T. H., H94
 Meara, P. A., E213
 Mearow, K., E397
 Meda, P., C699
 Meezan, E., E504
 Mege, J.-L., C589
 Mehlsen, J., R149
 Mehta, J. L., H153
 Mehta, P., F1138
 Meininger, C. J., H554
 Meiss, R. A., C34
 Mela-Riker, L. M., F265
 Melin, T., G612
 Melinskyshyn, M. J., H77
 Mendl, C. M., E110, E221
 Mendelsohn, D., H673
 Mendelsohn, F. A. O., H1011
 Mené, P., C771, F1059
 Mengual, R., F1249
 Menon, R. K., E87
 Merlo, A., G787
 Messana, J. M., F874
 Metting, P. J., H44, H483
 Meyer, J. H., G7
 Meyer, R. A., G772
 Meyer, T. W., F1243
 Meyer-Lehnert, H., F142, F771
 Michael, L., E812
 Michaud, A., E411
 Michel, J. B., F250
 Michel, M. C., E880
 Mifflin, S. W., H1349
 Mignon, M., G596
 Miki, K., R274
 Mill, J., E397
 Miller, B., E636
 Miller, C. E., H1144
 Miller, C. F., H177
 Miller, D. S., R492
 Miller, L. J., G579, G653
 Miller, M. J. S., G556, F151
 Miller, R. H., E475
 Miller, V. M., H446
 Mills, S., H616
 Millward, D. J., E166, E617
 Minmra, A., F1085
 Minami, T., R134
 Miner, L. K., R846
 Miniat, M., H375
 Mircheff, A. K., G367
 Mirro, R., H401
 Mirsky, I., H1525
 Mitas, M., C12, F1047
 Mitchell, K. D., F383
 Miyai, K., G454
 Miyamoto, M., F1230
 Miyamoto, Y., G85
 Miyoshi, H., E871
 Mizelle, H. L., R894, F823
 Mizrahi, N., E886
 Moates, J. M., E428
 Moe, A. J., C95
 Mohabir, R., H992
 Mohan, P. F., E1
 Mohler, F. S., R464
 Mohrman, D. E., H1004
 Mokuda, O., E843
 Moldow, R. L., E265
 Molony, D. A., F1128, F1145
 Molski, T. F. P., C589
 Momomura, S.-I., H1468
 Monafu, W. W., H953
 Monos, E., H1289
 Montani, J.-P., H592
 Montégut, M., F43
 Montgomery, R. J., H94
 Montrose, M. H., C76
 Montzka, D. P., G175
 Mooney, J. L., C408
 Moore, R. Y., R332
 Morad, M., H111, H960
 Moran, T. H., G512, R14, R113, R1059
 Moran, W. M., R583
 Morand, C., R539
 Moreland, R. S., C473
 Moreland, S., C473
 Moreno-Sánchez, R., H347
 Morey-Holton, E., E875
 Morgan, D. A., H496
 Morgan, R. G. H., G670
 Morgan, S. J., C447
 Morimoto, S., F614
 Morin, L. P., R1
 Morkin, E., H801
 Morley, J. E., E153
 Morris, B. J., E353
 Morris, D. L., H937
 Morris, K. G., H691
 Morris, M., R768
 Mortimore, G. E., C70
 Moseley, J., F957
 Moseley, R. H., G253
 Moskowitz, M. A., H1
 Moss, M., H53
 Mostow, W. R., C202
 Motulsky, H. J., E880
 Moumuni, C., G571
 Muallim, S., G221, G229, F331
 Mullane, K. M., G556
 Muller, J., C661
 Müller, M. J., E146
 Müller, S., F479
 Mulroney, S. E., F287
 Munger, J. C., R174
 Murer, H., C76, C155
 Murphy, M. B., F494
 Murphy, R. A., C86, C401, C473, C719
 Murphy, S. M., G253
 Murray, P. A., H569, H1084
 Murry, C. E., H1188
 Mustafa, S. J., H1492
 Muto, S., F108
 Muza, S. R., R456
 Myers, B. D., F257
 Myers, C. L., R295
 Nadeau, R., H1342
 Nag, A. C., C291
 Nagai, K., E928
 Nagai, R., H325
 Nagao, M., E652
 Nagata, M., H1330
 Nakagawa, H., E928
 Nakagawa, Y., F1197
 Nakamura, A., E437
 Nakamura, M., C573, H410, H754
 Nakamura, Y., H1311
 Nakanishi, S., E129
 Nakanishi, T., C181
 Nakanishi, Y., R724
 Nakao, A., F704
 Nakayama, K., E129
 Nakazawa, H., H213
 Naruse, S., G522
 Nash, N. T., C245
 Natali, A., E953
 Nauntofte, B., C508
 Navar, L. G., F383, F936
 Navarro, L. T., H219
 Nayler, W. G., H60
 Nazian, S. J., R534
 Nellis, S. H., H169
 Newby, F. D., E716
 Newsholme, E. A., E41
 Nichols, W. W., H153
 Nicolaides, S., R82
 Niel, J. P., G759
 Nieminen, A.-L., C315
 Niewiarowski, S., H651
 Nilsson, A., G612
 Ninomiya, I., H704
 Nishijima, M. K., H177
 Nishimoto, I., C442
 Nishimura, H., R591
 Nishimura, M., H7
 Nishizaki, H., E652
 Nissenbaum, J. W., R672
 N. Mochinaga, N., G409
 Noeh, Z., F429
 Nolan, C. R., H1181
 Nolan, K., G713
 Noma, A., H980
 Noma, S., H301
 Nompellegi, D., G767
 Nonoguchi, H., F421
 Norbeck, O., H1000
 Nord, E. P., F486
 North, R. A., G603
 Northrup, T. E., F237
 Notter, R. H., R1049
 Novakofski, J., E513
 Novikov, V. E., R243
 Nowicki, P. T., H1144
 Nozawa, T., H807
 Nunez, A. A., E583
 Núñez-Durán, H., C479
 Nussberger, J., H36, H245, F1085
 Nutting, C., H1378
 Nuwayhid, B. S., H592
 Nyhan, D. P., H569, H1084
 Nyomba, B. L., E942
 Oates, P. S., G670
 Obal, F., Jr., R310
 Obál, R., Jr., R914
 Oberleithner, H., F699
 O'Connor, R. P., F874
 O'Donnell, M. E., C169
 Ogata, E., E137, C442
 Ohishi, K., F415
 Ohkubo, H., E129
 Ohkuwa, T., E456
 Okino, H., H213
 Okuda, Y., E812
 Okusawa, S., E760
 Olbe, L., G752
 O'Leary, D. S., H910
 Oleggi, M., E946
 Olivecrona, T., E247
 Oliver, C., E463
 Ong, F., R1025

AUTHOR INDEX TO VOLUME 255

Onsgard, M., F984
 Onsgard, M. J., F96
 Ookhtens, M., G403
 Omura, Y., R134
 Oparil, S., H1018
 Opp, M. R., R914
 Orlando, R. C., G286
 Orrego, H., G417
 Ortola, F. V., F1091
 Osaka, T., R961
 Osborn, J. L., F1116
 Osborne, J. A., H318
 Osborne, F., R1025
 Osgood, R. W., F313
 Ota, K., E449, R731
 Ota, M., E449
 Owen, N. E., C169
 Owyang, C., G261

Pachter, J. A., C633
 Page, R. B., R295
 Paielli, D. L., F647
 Pairet, M., G12
 Palle, S., R243
 Paller, M. S., F539
 Pallone, T. L., F1225
 Pan, C. M., R709
 Panagia, V., E347
 Pandol, S. J., G221, G229
 Pandolf, K. B., R456
 Pang, P. K. T., R635, R643
 Papadopoulos, M. T., H1476
 Pardridge, W. M., E221, E403
 Pares-Herbuté, N., E463
 Parisi, M., E613
 Park, C. H., F520
 Park, I. R. A., R874
 Park, J., G99
 Park, M., H160
 Park, T. S., H1211
 Parker, J. C., H375, H1075, H1130, H1149
 Parkhouse, W. S., R513
 Parks, D. A., H202
 Parmentier, M., F100
 Parrott, R. F., R248
 Patchin, D., F685
 Patel, A., G779
 Paterson, W. G., G587
 Paton, J. B., E743
 Patrick, M., G201
 Paul, R. J., C393, C465
 Paul, R. V., F936
 Peach, M. J., C452, F545, F749
 Peikin, S., G685
 Pekar, S. K., F898
 Pell, J. M., E166
 Pellecchia, C., G738
 Penniston, J. T., H101
 Perdue, M., G201
 Perfetto, M. C., F898
 Perna, A., F444
 Perry, M. L., H1075, H1130
 Perticucci, E., F237
 Peter, R. E., R268
 Peters, E. J., E548
 Petersen, O. H., G275
 Peterson, D. R., C822
 Peterson, J., E247
 Peterson, M. W., C603
 Peterson, T. V., R388
 Peterson-Yantorno, K., F126
 Pettinger, W. A., F1107
 Phifer, C. B., R191
 Philipson, K. D., C870

Phillips, M. I., C502, R500
 Piacsek, B. E., E482
 Pichet, R., H1330
 Pickett, J. B., C60
 Pieper, D. R., R718
 Pieper, G. M., H825
 Pillion, D. J., E504
 Pinto, M. R., H101
 Pistolesi, M., H375
 Pitt, R. M., H1075
 Pittam, B. S., G319
 Pizurki, L., F957
 Planelles, G., F158
 Plata-Salamán, C. R., R134
 Plecha, D. M., R703
 Plotsky, P. M., E287
 Ploug, T., E456
 Poapst, M., E236
 Pohl, U., H765
 Pomerantz, S. M., E857
 Porcelli, R. J., H329
 Porte, D., Jr., R200
 Porter, J. R., E229
 Portman, M. A., H189
 Potts, J. T., Jr., E886
 Pourcyrous, M., H343
 Pousti-Delpont, C., F1249
 Powers, K. V., F340
 Powers, S. P., G579
 Praissman, M., G738
 Prasad, R., F1183
 Pratt, R. E., F563
 Preisig, P. A., F461
 Pressley, T. A., C251
 Preston, A. S., C661
 Pretus, H. A., R46
 Prewitt, R. M., H119
 Priebe, H.-J., H1232
 Prince, M. J., E548
 Pritchard, J. B., R492, F597
 Proppe, D. W., H266
 Prosdocimi, M., C559
 Pryor, A., R128
 Putney, J. W., Jr., C149

Qin, D., H980
 Qu, L., R946
 Quamme, G. A., G292
 Quenneville, A., R42
 Quinn, S. J., E488
 Quinton, P. M., C102

Rabinovitch, M., H1484, H1499
 Rabito, C. A., C745
 Radke, K. J., E793
 Raff, H., R851
 Raich, P. C., R563, F944
 Raine, A. E. G., F391
 Rajotte, R., R1035
 Ramachandran, J., E903
 Ramagopal, M. V., H1492
 Ramanathan, M., H197
 Ramaswamy, K., G206
 Randall, W. C., H358, H525, H789, H1050, R703
 Randles, J., C486
 Rankin, A. J., H1199
 Rankin, J. S., H85, H1399
 Rannels, D. E., E65
 Rao, M. C., C245
 Rao, P. S., E636
 Rapoport, J., F429
 Rapoport, S. I., R317
 Rattan, S., G389, G571, G587
 Philipson, K. D., C870

Ravussin, E., E332
 Rawashdeh, N. M., R67, R794
 Ray, N. D., R67, R794
 Ray, S., F574
 Raybould, H. E., G242
 Raymond, K. H., F1033
 Razlog, Y., H53
 R. D. Ridgeway, E299
 Read, N. W., G490, G800
 Readling, R. D., G286
 Reaven, E., E903
 Rechthand, E., R317
 Rector, F. C., Jr., F461
 Reddy, S., F66
 Redfern, J. S., G723
 Reed, J. B., C828
 Reed, R. K., H1069
 Reed, W. P., H1227
 Reeve, L. E., G745
 Reeves, J. H., H722
 Reeves, W. B., F1138, F1145
 Regal, R. R., H1004
 Regazzi, R., C699, G33
 Reid, I. A., E46
 Reid, I. R., E9, E660
 Reimer, K. A., H1188
 Reimer, P. R., F500
 Rembold, C. M., C719
 Remesy, C., R539
 Ren, C., G403
 Reneman, R. S., H1240
 Renkin, E. M., H458
 Rennke, H. G., F1243
 Repine, J. E., F728
 Restrepo, D., C304
 Revtyak, G. E., C214
 Ribet, A., G113
 Riboni, L., C479
 Ribstein, J., F270, F1085
 Richard, D., R226
 Richard, V. J., H1188
 Richardson, B. P., C433
 Richardson, S., E829
 Richter, D., F207
 Richter, E. A., E621
 Riedel, G. L., H1091
 Riese, J. W., F1025
 Riese, R. J., F1025
 Rigel, D. F., H311
 Rillema, J. A., E567
 Ringo, J. A., H1405
 Ritchie, A. K., H219
 Ritter, R. C., R569, R988
 Rizzoli, R., F957
 Robb, R., R117
 Robberecht, W., R407
 Robert, M. Q., E280
 Roberts, M. H., R332
 Robertson, C., F1230
 Robie, N. W., R379
 Robinson, K. A., E159
 Robinson, N., H1247
 Robinson, P. H., R14
 Robinson, V., H947
 Rocchetti, M., E775
 Rochat, T., C603
 Rochet, N., E101
 Rodbard, D., E775
 Rodriguez-Zendejas, A. M., R908
 Roe, T. F., E416
 Roeder, L. M., C133
 Rogers, T. B., C51
 Roman, R. J., F690
 Rosmos, D. R., E54, E597, R141, R952
 Rausch, R. N., R600

Rook, M. B., H770
 Rose, C. E., Jr., F545, F749
 Rose, J. C., R67, R794
 Rosenberg, E., H1542
 Rosenberg, H. C., H1484
 Rosenberg, I. H., G339, G361
 Rosenblum, J. L., G374
 Rosenfeld, M. J., F1281
 Rosenthal, M., R478, R485
 Rosewicz, S., G818
 Ross, M. G., E674
 Rossi, N., H885
 Roth, R. A., H1165
 Rothe, C. F., H690
 Rothwell, N. J., E617
 Rotwein, P., E513
 Rowell, L. B., H760
 Roy, R. R., C43
 Rozen, R., F1191
 Rozsa, F. W., E723
 Rubanyi, G. M., H783
 Rubio, R., H1211
 Ruckebusch, Y., G12
 Rüegg, J. C., C465
 Rühs, H., R418
 Rumsey, W. L., H1295
 Russek, M., R908
 Ruszniewski, P., G596
 Rutlen, D. L., H1219
 Ryan, J., R61
 Ryan, U. S., C311
 Rybczynska, A., R557
 Rymaszewski, Z., H160

Saavedra, J. M., H646
 Saba, T. M., H1421
 Sacktor, B., F1183
 Sacquet, J., H729, H736
 Sada, H., H540
 Sadoshima, J.-I., H410, H754
 Safar, M. E., H36
 Sagawa, K., H1263
 Saito, K., H1
 Sakaguchi, T., R284, R507
 Sakamoto, C., E652
 Sakamoto, N., E920
 Sakamoto, T., H953
 Sakamoto, Y., R724
 Saldivia, V., G417
 Salhanick, A. I., E173
 Salmons, S., C543
 Saltiel, A. R., C1
 Salzman, E. W., H855
 Samarel, A. M., C19, C202
 Samson, S. E., C297
 Samuel, D., R718
 Sanabria, P., H638
 Sander-Jensen, K., R149
 Sanders, B. J., R431
 Sanders, K. M., C828
 Sands, J. M., F421
 Sandström, P.-E., E591
 Sann, H., R575
 Sansom, S., F108
 Santi, P. A., F711
 Santoro, D., E953
 Santoro, N., E696
 Sarna, S. K., G409, G619
 Sartori, L., F1078
 Sary, G., R310
 Sas, D., G653
 Sasaki, S., F49
 Sassard, J., H729, H736
 Satlin, L. M., F1003
 Sato, A., E23

AUTHOR INDEX TO VOLUME 255

Sato, K., E449
 Sautel, M., H729, H736
 Savard, P., H1342
 Savoie, F., E411
 Sawka, M. N., R456
 Sawmiller, D. R., G168
 Scaduto, R. C., Jr., F911
 Scarpa, A., F1059
 Scarpace, P. J., E153
 Schaeverbeke, J., F250
 Scheid, C. R., C226, 694
 Scheide, J. I., G247
 Schelling, M. E., H554
 Schelling, P., H1206
 Scher, A. M., H673, H910
 Schersten, T., H1156
 Schettini, A., R799
 Scheurink, A. J. W., R200, R547
 Schick, U., H19
 Schiebinger, R. J., H1429
 Schiffrrin, E. L., H693, F621
 Schilling, W. P., H219
 Schipke, J., H679, H742
 Schjoldager, B., G579
 Schmacht, D. C., H1050
 Schmid, P. G., H70
 Schnall, M. D., C377
 Schneider, E. G., R806
 Schneider, F., H1289
 Schnellmann, R. G., C28
 Schnermann, J., F33, R449
 Schoeffield, M. S., G221, G229
 Schoen, H. F., C357
 Schouten, V. J. A., H1263
 Schreiner, V. J., G286
 Schrier, G. M., H138
 Schrier, R. W., F142, F771
 Schroeder, E. T., F685
 Schroedl, N. A., C519
 Schubert, C., F479
 Schuessler, R. B., H503
 Schultheiss, H.-P., H960
 Schultz, H. D., R6
 Schulz, E. E., E416
 Schulz, I., G429
 Schulz, R., H679
 Schuster, V. L., F220, F720
 Schwartz, G. J., F1003
 Schwartz, J. H., F307, F1155
 Schwartz, T. W., G46, R149
 Schwartzman, M., F151
 Scicchitano, R., G701
 Scicli, A. G., F408, F690
 Selafani, A., R672
 Scott, J. A., C745
 Scott, J. W., F828
 Scott, N., R61
 Scott, R. B., G505
 Scrivener, C. R., F88
 Seal, A., G40
 Sebokova, E., E442
 Seeger, W., C368
 Segre, G. V., E886
 Seguin, E. B., G99
 Sehlin, J., E591
 Seibert, G. B., H197
 Seidman, C. E., E383
 Seidman, J. G., E383
 Seitz, R., H651
 Seldin, D. W., F807
 Selhub, J., G361
 Seri, L., F666
 Serizawa, T., H1468
 Sessler, F. M., E531
 Severi, C., G647
 Sha'afi, R. I., C589
 Shah, R., G389
 Shah, S. V., F438
 Shangraw, R. E., E548
 Shanley, P. F., F728
 Share, L., R1041
 Sharill, N., E255
 Sharill, N. S., R974
 Sharp, F. R., R178
 Shasby, D. M., C781
 Shasby, S. S., C781
 Sheikh, S. P., G46
 Shen, Y.-T., H358, H525
 Shenasa, M., H1342
 Shenberger, J., H937
 Shenker, Y., R867
 Shepherd, A. P., H1091
 Sherebrin, R., R946
 Sheridan, J. D., C674
 Sherman, D. J., E674
 Sherman, W. M., E374
 Shi, L.-B., F1220
 Shibata, N., H891, H902
 Shibuya, N., E137
 Shigei, T., H288
 Shimazaki, S., H953
 Shimizu, H., E255
 Shin, A., C653
 Shine, K. I., H467
 Shinozaki, Y., H213
 Shinsaku, J., E241
 Shinyama, H., F614
 Shionoya, S., G522
 Shiozawa, D. K., F1281
 Shirakawa, J., R888
 Shiratori, K., G635
 Shnayder, L., R1059
 Shoham, S., R157
 Shoji, M., E449, R731
 Shouji, T., E437
 Shoukas, A. A., H1305
 Shultz, P. J., F674
 Siaume-Perez, S., F43
 Sibley, L., H458
 Sick, T. J., R478, R485
 Siderowf, A. D., R846
 Silbernagl, S., F397
 Silen, W., G395
 Silva, J. E., E496
 Silva, P., R212, F324
 Silver, B. J., F674
 Silverman, M., E357
 Simon, E., R575
 Simon, E. E., F861
 Simon, G., H860
 Simon, S. A., R117
 Simonsen, L., E572
 Simonson, M. S., C771
 Singh, A. K., F590
 Singh, P., G627
 Sinoway, L. I., H937
 Sipkema, P., H280, H476
 Siragy, H. M., F545, F749
 Siri, F. M., H452
 Sisk, C. L., E583
 Sjovall, H., G752
 Skak-Nielsen, T., G46
 Skale, B. T., H26
 Skelton, M. M., H144
 Skopicki, H. A., C822
 Skorecki, K., F995
 Skott, O., F1
 Slaf, D. W., H1240
 Sladek, C. K., E793
 Sladky, K. K., E857
 Slayman, C. W., C495
 Slinker, B. K., H366, H394, R353
 Slomowitz, L. A., F755
 Smith, B., H717
 Smith, D. B., H1254
 Smith, E. F., III, H1060
 Smith, E. R., H947
 Smith, F. G., F11
 Smith, G. P., R113
 Smith, J. K., G542
 Smith, L. W., H699
 Smith, M., H855
 Smith, P. B., F474
 Smith, P. L., G175
 Smith, P. M., R492
 Smith, Q. R., R317
 Smith, S. M., R90, C519
 Smith, S. R., H94
 Smith, T. K., C828
 Smith, U., E218
 Smith, W. L., F704
 Smith, W. M., H891, H902
 Snape, W. J., Jr., G779, G807
 Snow, D. H., R513
 Sobhani, I., G596
 Soejima, H., R449
 Soffer, R. L., H1542
 Soll, A. H., G424
 Solomon, R., R212
 Solomon, T. E., G813
 Solti, F., H1289
 Somers, M. B., G529
 Sonn, J. K., C278
 Sonne, B., R400
 Sonnenblick, E. H., E636
 Sonnenburg, W. K., F704
 Sorscher, E. J., C835
 Soto-Mora, L. M., R908
 Sowell, M. O., E159
 Sparks, H. V., H1460
 Spencer, J., R861
 Sperelakis, N., H540
 Sperling, M. A., E33, E87
 Spielman, W. S., C581, F704
 Spitzer, J. J., E629
 Spratt, J. A., H85
 Spray, D. C., C699
 Spring, K. R., F711
 Sprugel, K. H., H1165
 Stadeager, C., R149
 Stanley, W. C., E94
 Stanton, B. A., F278, F1256, F1269
 Staple, L. H., C754
 Star, R., F807
 Starnes, H. F., Jr., E206
 Steadman, E., C835
 Steffens, A. B., R200, R547
 Stein, J. H., F313
 Stein, W. D., F558
 Steinbach, J. H., G454
 Steiner, G., E236
 Steiner, L., G313
 Steiner, M., C502
 Stern, A. M., E886
 Sterzel, R. B., C844, C857, F898
 Stevenson, J. L., E293
 Stevenson, T. R., H1043
 Stewart, D. J., G346, H765
 Stierle, A., H1276
 Stiles, G. L., E636
 Stirewalt, W. S., H325
 St-Louis, J., H693
 Stock, M. J., E617
 Stoff, J. S., R212
 Stokes, B. T., C162
 Stokes, J. B., F220, F229, F720, F1160
 Stoner, L. C., F1276
 Storch, K. J., E322
 Storelli, C., R648
 Storer, G. B., E306
 Storey, K. B., R289, R744
 Strada, S. J., H335
 Strader, J. R., H44
 Strange, K., C612
 Striker, G. E., F1214
 Striker, L. J., F1214
 Stuart, C. A., E548
 Stubbart, J. R., E723
 Stuttard, E., R513
 Suarez, R. K., R699
 Subbiah, M. T. R., H160
 Sudaka, P., F1249
 Suga, H., H807
 Sugden, P. H., E537
 Sugimoto, T., H1468
 Sugiya, H., C149
 Sullivan, M. P., H295
 Sun, A., F962
 Sun, Y., H664
 Sundberg, D. K., R67
 Surmacz, C. A., C70
 Surprenant, A., G603
 Susini, C., G113
 Sutton, E. T., H426
 Sutton, R., R368
 Sutton, S. W., E287
 Suttorp, N., C368
 Suvannapura, A., G267
 Suzuki, K., G275
 Suzuki, T., G619
 Svoboda, M., G113
 Swain, J. A., H189
 Swanson, V., H1378
 Swick, A. G., E865
 Swick, R. W., E865
 Sykes, M. N., E716
 Synhorst, D. P., R232
 Szafarczyk, A., E463
 Szczepanska-Konkel, M., F984
 Szilagyi, J. E., H987
 Szlyk, P. C., R252
 Szurszewski, J. H., G566
 Taborsky, G. J., Jr., E785
 Taché, Y., G242
 Taddei, S., E953
 Tahiri-Jouti, N., G113
 Taira, Y., E347
 Takagi, T., G522
 Takagi, Y., H405
 Takahashi, J. S., R1055
 Takahashi, M., R507
 Takaichi, K., F834
 Takakura, K., E137
 Takata, S., H405
 Takeda, K., F142
 Tamai, J., H250
 Tamura, K., F1122
 Tanaka, C., R888
 Tanaka, N., H807
 Tangleider, G.-J., H1240
 Taniyama, K., R888
 Tannenbaum, G. S., R373
 Tanner, J. A., C34
 Tanti, J.-F., E101
 Tao, W., C589
 Taquini, A. C., C123

AUTHOR INDEX TO VOLUME 255

Tarjan, E., R1020, R1025
 Tasdemiroglu, E., H1050
 Taylor, A. E., H375, H1075,
 H1130, H1149
 Tazuma, S., G745
 Teague, W. G., H1336
 Telford, G. L., G566
 Templeton, G. H., H197
 Tenenhouse, H. S., R373, F88
 Teramoto, A., E137
 Terjung, R. L., C271
 Tessari, F., C559
 Thames, M. D., H1136
 Thebert, M. M., E583
 Theodorsson-Norheim, E., G46
 Thévenod, F., G429
 Thibault, G., F621
 Thiruvengadam, R., G476
 Thomas, E. M. V., R237
 Thomas, J. W., E397
 Thomas, J. X., Jr., H358, H525
 Thompson, J. C., G627
 Thompson, L., H153
 Thor, P., G490
 Thoren, P., H496
 Thornton, R. M., H266, H1018
 Thornton, S. N., R248
 Tildon, J. T., C133
 Tillotson, D. L., E488
 Tipayamonti, U., H592
 Tipnis, U. R., G304
 Tisher, C. C., F115
 Toback, F. G., F800, F868
 Tobey, N. A., G286
 Tobin, B., R90
 Tobler, I., R27
 Tokumo, H., G745
 Tollefson, S. E., G374
 Tollefson, J. H., E894
 Toma, B. S., H1460
 Tominaga, M., E843
 Tomoike, H., H410
 Tonge, A., G27
 Tonini, M., G603
 Tonkin, A. M., H1247
 Toorop, G. P., H1263
 Tooli, J., G490
 Topping, D. L., E306
 Torres-Aleman, I., R839
 Tosteson, D. C., C346
 Touain, P. L., E688
 Townsley, M. I., H1075
 Toyofuku, T., H434
 Trachsel, L., R27
 Traystman, R. J., H177, H1516,
 R1049
 Tredget, E. E., E760
 Trimble, R. P., E306
 Tripathi, S., F188
 Trivedi, R. D., R780
 Tsai, P., F771
 Tseng, C.-C., G304
 Tao, P., G690
 Tullson, P. C., C271
 Tun, L., H111
 Turek, F. W., R1055
 Turnamian, S. G., G329
 Turnberg, L. A., G27
 Turner, A. J., G676
 Turner, J. D., E513
 Turrini, F., C559
 Twente, S., E329
 Twidale, N., H1247
 Ubaldo, E., C479
 Uchida, S., F977
 Ulrich, G., H960
 Umeda, Y., H405
 Unger, T., H1206
 Ungerstedt, U., E737
 Vaccarezza, S. G., G696
 Vale, W. W., E287
 Valenti, G., F1098
 Valenzuela, J. E., G93
 Valeri, C. R., R456
 Van Der Heijden, J. T. M., E80
 Van der Kraak, G., R268
 Van Deventer, G., G779
 Van Dijk, L. C., H476
 Vandongen, R., H717
 Van Dreal, P., F1107
 Van Eekelen, J. A. M., R500
 Van Epps, D., H1227
 Van Ginneken, A. C. G., H770
 Van Ha, T., C346
 Vanhoutte, P. M., H207, H446,
 H1032
 Van Lunteren, E., R780
 Van Obberghen, E., E101
 Van Scott, M. R., C237
 VanScoy, M., F984
 Van Toor, H., E80
 Van Wylen, D. G. L., H1211
 Vargas, F. F., H638
 Varghese, G. A., G417
 Vassort, G., C192
 Vatner, D. E., H1452
 Vatner, S. F., H358, H525,
 H1452, H1525
 Vaysse, N., G113
 Veale, W. L., R73
 Veelken, R., H1206
 Veith, R. C., E785
 Veldhuis, J. D., E749
 Vengen, Q. A., H228
 Venuto, R. C., E16
 Verkman, A. S., C789
 Verlander, J. W., F115
 Vermeulen, M., H1342
 Vermillion, D. L., G701
 Vico, L., R243
 Victor, R. G., H496
 Viguierie, N., G113
 Vila, J. M., E801
 Vilella, S., R648
 Villeneuve, S. M., H77
 Vina, J., E801
 Vincent, M., H729, H736
 Vissing, J., E456, R400
 Vitković, L., E397
 Voelkel, N. F., H691
 Vogl, W., R699
 Von Dreele, M. M., F953
 Von Schrenk, T., G512
 Vrielink, H. H. E. O., H1240
 Wabner, C. L., F1197
 Wade, J. B., C526
 Wade, P. R., G184
 Waeber, B., H245, F1085
 Wagerle, L. C., H563
 Wagner, D. A., E322
 Wagner, J. G., H1165
 Walker, B. R., H261, R46
 Walker, H. C., R952
 Walker, J. S., C536
 Walker, P. D., F438
 Wall, S. M., F331
 Wallace, J. L., R861
 Wallace, P., E769
 Walser, B. L., F244
 Walsh, E. K., R799
 Walsh, J. H., G676
 Walsh, K. F., R368
 Walsh, L. G., H917, H929
 Walsh-Resler, M. M., F868
 Walusimbi-Kisitu, M., H441
 Wang, B. C., R259, R1064
 Wang, D. Y., C798
 Wang, L. C. H., R1035
 Wang, X., ET23, H1378
 Wangler, R. D., H1460
 Wank, S. A., G106
 Warberg, J., G46, R149
 Ward, W. F., C70
 Warden, D. H., F720
 Ware, J. A., H855
 Warhurst, G., G27
 Warren, R. S., E206
 Warwick, B. P., R141
 Wasserman, D. H., E428
 Wasserman, M. A., G175
 Watanabe, T., E23
 Watanabe, Y., H7
 Waters, S. B., E567
 Watlington, C. O., F736
 Wattenberger, J. M., H197
 Wayland, H., G731
 Weaver, L. C., R946
 Webb, R. C., H1542
 Weber, J.-M., R513
 Weber, K. M., E668
 Weber, M. A., H616
 Webster, S. K., F287
 Wei, E. P., H1, H397, H847,
 H1259
 Weingarten, H. P., R21
 Weinstock, M., R654
 Weinstock, R. S., E730
 Weintraub, W. S., H301
 Weischedel, G. R., H1188
 Weisiger, R. A., E110, E221,
 G822
 Weisinger, R. S., R205
 Weiss, H. R., H623, H1384
 Welch, I. McL., G800
 Weller, A., R901
 Welling, D. J., F529
 Welling, L. W., F529
 Welling, P. A., F853
 Wendt, I. R., C536
 Wennmalm, A., H15
 Wert, J. J., Jr., C70
 Werther, G. A., E33
 Wertz, J., F911
 Wesslén, N., E422
 Westbrook, S., E660
 Westenfelder, C., F1281
 Westerhof, N., H280, H476,
 H1263
 Wheeler, N., H467
 White, B. D., E229
 White, C. W., H866
 White, J. F., G18, G640
 White, R. E., H1036
 White, S. M., H1165
 White, T. P., H659
 White J. F., R677
 Whiteside, C. I., E357
 Whittenburg, D., F728
 Widmaier, E. P., E287
 Wierzbicki, A., E442
 Wiesner, J. H., F1025
 Wiig, H., H1069
 Wiike, J. S., H335
 Wilczynski, E. A., H496
 Wilke, A., C368
 Williams, E. A., H94
 Williams, G. H., E488
 Williams, J. D., C447
 Williams, T. D. M., R368
 Wilson, D., G132
 Wilson, D. F., H1295
 Wilson, J. S., H937
 Wilson, N., H1199
 Wilson, R. F., H866
 Winder, W. W., R38
 Windhager, E. E., F787
 Wingate, D. L., G319
 Wingrove, T. G., C737
 Winter, M., C781
 Witek-Janusek, L., E525
 Withers, R. T., E374
 Wolf, P. D., H831, H902
 Wolfe, R. R., E548, E871
 Wolf, S. D., F581
 Wollheim, C. B., G33
 Wollmuth, L. P., R600
 Wollnik, F., R1055
 Wolosin, J. M., C595
 Wolpert, E. B., E65
 Womack, W. A., G162
 Wong, E. F. C., C260
 Wong, K. R., F1220
 Wong, N. L. M., E260
 Wong, S. M. E., F1015
 Wood, C. E., R412
 Wood, J. G., G813
 Wood, R. J., G339
 Wood J. D., G184
 Woods, L. L., R894, F823
 Woods, R. L., E934
 Woods, S. C., R200
 Worcester, E. M., F1197
 Worlidge, J., G800
 Wright, T. L., G547
 Wu, J., E388
 Wu, K. I., F15
 Wurster, R. D., H789, R703
 Xie, M.-H., F1220
 Yacoub, C., R539
 Yagil, Y., F244, F257, F1230
 Yakubu, F., R616
 Yamada, T., G99
 Yamaguchi, K., R591
 Yamamoto, A., E437
 Yamamoto, H., E928
 Yamamoto, K., E642
 Yamane, Y., H405
 Yamashita, H., R961
 Yamashita, N., C442, E137
 Yanagisawa, M., H970
 Yanase, M., E920
 Yang, H. T., R38
 Yang, J. M., F787
 Yang, Y., R395
 Yankaskas, J. R., C237
 Yarbrough, J. D., G132
 Yasumura, Y., H807
 Yatani, A., H722
 Yatomi, A., E920
 Ymer, S. I., E293
 Yonei, Y., G731
 Yoneyama, Y., C816
 York, D. A., E255, R974
 Yoshimi, H., H405
 Yoshinaga, K., E449, R731

AUTHOR INDEX TO VOLUME 255

| | | | |
|--------------------------|--------------------------|------------------------------|-------------------------|
| Yoshioka, K., H288 | Young, M. A., H1452 | Zager, R. A., F450 | Zimmerman, B. J., H202 |
| Yoshioka, M., G212 | Young, V. R., E322, E760 | Zamir, N., E383 | Zimmerman, D., R61 |
| Yoshiyama, N., F49 | Yox, D. P., R569 | Zeidel, M. L., F324 | Zimmerman, R. S., R61 |
| Yotts, M., E886 | Yrke, L. F., G542 | Zelis, R., H937 | Zipes, D. P., H26, H534 |
| Youn, J. H., E680 | Yu, Y. M., E760 | Zhong, S., E760 | Ziyadeh, F. N., C385 |
| Young, A. J., R456 | Yunker, R. L., H160 | Zhu, J. L., R1064 | Zola, B. E., E636 |
| Young, D. B., H592, F811 | Zadunaisky, J. A., G247 | Zikos, D., C822 | Zschauer, A., C433 |
| Young, J. B., E180 | | Zimmerman, B. G., R563, F944 | Zucker, I., R831 |

